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Lac Seul Forest

INDEPENDENT FOREST AUDIT
2001 - 2006

Prepared By:

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1.0. EXECUTIVE SUMMARY

This report presents the findings of an Independent Forest Audit (IFA) conducted on the Lac Seul Forest (LSF) for the five-year period from April 1st, 2001 to March 31st, 2006. The audit period encompassed the implementation of the 2001-2021 Lac Seul Forest Management Plan (FMP) and the production of the 2006-2026 Lac Seul FMP. For the period of the audit, the Forest was managed by McKenzie Forest Products (MFP) under Sustainable Forest License # 542455. Administration of the Forest is the responsibility of the Sioux Lookout District, Ontario Ministry of Natural Resources (OMNR), Northwest Region.

The audit conformed to the requirements of the 2006 Independent Forest Audit Process and Protocol (IFAPP) prepared by the Ontario Ministry of Natural Resources (OMNR). The Independent Forest Audit (IFA) process is based on a detailed assessment of eight broad principles. Each principle has a series of specific criteria which are examined to determine whether or not the management of the Forest was in compliance with the legislation, regulations, and policies that were in effect during the audit term.

Following a comprehensive review of records and documents, field investigations and information received from interviews, meetings and questionnaires, it is our conclusion that the implementation of the 2001 FMP, and the development of the 2006 FMP substantially met Forest Management Planning Manual (FMPM) requirements based on the following findings:

- Appropriate information was available to support planning efforts.
- A planning team with the required expertise was established and supported by the OMNR and MFP.
- Forest management planning activities adhered to FMPM requirements.
- A Local Citizens Committee (LCC) was properly constituted and participated in the planning and implementation of the FMPs.
- Public consultation and First Nation consultation requirements were fully met.
- Areas of Concern (AOC) were properly planned, prescriptions implemented and monitored.
- Plan implementation (e.g. harvest, renewal, tending) adhered to appropriate standards and manuals.
- MFP and OMNR compliance efforts were well done, and appropriate for the scale of operations on the Forest.
- Records were well organized, accessible, and current.
- Staff had received appropriate training.

Some shortcomings or concerns were identified. These included:

- Full utilization of planned levels of larch, poplar, and white birch has historically been problematic and remains an issue on the LSF.
- Allocations of red pine were chronically underutilized.
- Some improvements could be made in consistency of recording information in Strategic Forest Management Modeling (SFMM).

We are also of the opinion that the Lac Seul Forest is being managed sustainably. Our reasons for this conclusion are as follows:

- Management objectives with the exception of full species utilization and the achievement of harvest targets had been met.
- Indicators were in place for the longer term assessment of sustainability.
- The Forest was being successfully regenerated.
- Forest management actions were moving towards the emulating natural disturbances.
- Indicators suggested that ecological productivity was being preserved.
- Biological, ecological and social benefits were being received.

Eleven recommendations and five suggestions are provided to address issues identified by this audit.

It is our finding that the Lac Seul Forest is well managed. MFP was substantially in compliance with the legislation, regulations, and policies that were in effect at the time of the audit and we therefore recommend that the Minister extend Sustainable Forest Licence (SFL) # 542455 for a further 5 years.

2.0. INTRODUCTION

This report presents the findings of an Independent Forest Audit (IFA) conducted on the Lac Seul Forest for the five-year period from April 1st, 2001 to March 31st, 2006. The Forest is managed by McKenzie Forest Products Inc. (MFP) under Sustainable Forest Licence (SFL) # 542455. Administration of the Forest is the responsibility of the Sioux Lookout District, Ontario Ministry of Natural Resources (OMNR), Northwest Region. The audit period encompasses the implementation of the 2001-2021 Lac Seul Forest Management Plan (FMP) and the development of the 2006-2026 Forest Management Plan (FMP).

2.1. Audit Process

Ontario legislation requires that Forest Management Units (FMU) be audited every five years by an Independent Auditor. The audit applies to the OMNR and all licencees. The audit reviews the forest management plan for the FMU in relation to specific planning manual requirements in place at the time of plan approval, including a review of actual operations, and required monitoring and reporting. The effectiveness of forest management activities is examined based on planned vs. actual results as verified through record examination and field sampling. The audit reviews whether actual results in the field are comparable with planned results, and determines if they are accurately reported.

The 2006 Independent Forest Audit Process and Protocol (IFAPP) provides a comprehensive and consistent method of evaluating forest management activities on Crown land. It has approximately 400 individual procedures that direct the auditors to collect, analyze, interpret, and document appropriate information to determine if various criteria have been met. The results of the evaluation of evidence against the criteria determine the audit findings. Those findings are then analyzed and aggregated to determine the outcome of the audit.

The IFAPP states that the purpose of the independent forest audit is to assess:

- The compliance of forest management planning activities with the Forest Management Planning Manual (FMPM) and the Crown Forest Sustainability Act (CFSA).
- The compliance of forest management activities with the CFSA, the manuals approved under the CFSA applicable guides and with forest management plans.
- The effectiveness of forest management activities in meeting the forest management objectives set out in the forest management plan, as measured in relation to the criteria established for the audit.

- The relative success of forest management activities carried out compared to those that were planned.
- The effectiveness of any action plans implemented to remedy shortcomings revealed by a previous audit.
- The licensee's compliance with the terms and conditions of the forest resources licence.

The audit process is based on a detailed assessment of eight IFAPP principles:

- Commitment
- Public participation
- Forest management planning
- Plan implementation
- System support
- Monitoring
- Achievement of management objectives and sustainability
- Contractual obligations

A description of the principles is contained in Appendix C. Each principle has a series of criteria in the 2006 IFAPP based on applicable legislation, manuals and guidelines related to forest management. If the criteria are met, the principle has been achieved.

The audit was conducted by Arbex Forest Resource Consultants Ltd. The audit team consisted of three professional foresters and three professionals with expertise in fish and wildlife management, forest management planning, land use planning, public consultation and compliance. A list of audit team members and their qualifications is presented in Appendix B.

The audit consisted of the following elements:

Audit Plan: An Audit Plan describing the schedule of audit activities, audit team members, audit participants and the auditing methods was prepared and submitted to MFP, the OMNR Sioux Lookout District and the Chairperson of the Sioux Lookout Local Citizens Committee (LCC).

Public Notices: Several methods were used to solicit public participation and comment in the audit. A notice soliciting input from the public was placed in the Sioux Lookout Bulletin. Letters inviting comment and containing a questionnaire were distributed to a random selection of thirty-five percent of the individuals on the Lac Seul Forest Management Plan (LSFMP) mailing list. The purpose of the questionnaire was to provide

an opportunity for the public to identify forest management concerns or issues. Four responses to the survey were received.

Prior to the field audit First Nations with interests in the LSF were contacted by telephone, e-mail, and regular mail. The audit process was discussed and an invitation was extended to meet with the auditors. The contact numbers for the audit firm were provided and a questionnaire specific to First Nations was faxed to each community. No responses were received. During the field audit, each community was again contacted and extended an invitation for a meeting. A representative from the Lac Seul First Nation was interviewed by telephone, and an additional questionnaire was sent at his request. No response to the questionnaire was received. .

A member of the audit team attended a regularly scheduled meeting of the Sioux Lookout LCC on September 11th, 2006, to provide information on the purpose of the audit, and to encourage participation. A questionnaire specific to the LCC was distributed to all members. One response was received.

Pre-audit Meeting and Field Site Selection: Two auditors met with MFP staff on June 19th in Sioux Lookout and randomly selected sample sites for the field work phase of the audit. On June 20th, 2006 a pre-audit meeting was held with MFP, OMNR and an LCC representative to review and finalize the audit plan.

Pre-audit Document Review and Interviews: The audit period is the five-year period from April 1st, 2001 to March 31st, 2006. All documents associated with the implementation of the 2001-2021 FMP, and the planning and development of the 2006-2026 FMP were reviewed. Telephone interviews, person to person interviews, and e-mail exchanges were conducted with representative stakeholders.

Site Audit: The Arbex team spent eight days in Sioux Lookout (September 11th - September 18th) conducting field sampling, record reviews and interviews. Interviewees included MFP and OMNR staff, LCC representatives and other stakeholders (e.g. tourist operators, anglers, hunters). First Nations were again contacted by telephone; however, no formal interviews were held. The field site inspections represented approximately a 24 percent sample of the forest management operations that had occurred on the Forest over the five-year audit period (Table 1). Field sample sites were stratified to ensure representation of silvicultural activity, season of operation, contractors, year of operation, and Areas of Concern (AOC).

A comparison of invoiced silvicultural work with field activities was completed for a 20 percent sample of work listed in the "Forest Renewal and Maintenance Agreement, Specified Procedures Report (Draft)". Additionally, all roads approved in the 2006 Road Maintenance Agreement between OMNR and MFP were traveled and/or observed by helicopter.

Field sampling included site-specific examinations (e.g. planting sites, AOCs) as well as broader overviews made from aerial observations (e.g. moose aquatics, free-to-grow

areas). Individual sites were selected to represent a primary activity (e.g. harvesting, site preparation, chemical tending); however, all associated activities at the site were assessed at the same time, allowing us to augment the planned sampling intensity[1]. Two audit teams spent three and one-half days traveling roads on the Forest; one team spent one day sampling by helicopter. During this travel, road construction, maintenance and water crossings, as well as additional AOCs and management practices were observed.

TABLE 1 FIELD SAMPLING INTENSITY ON THE LAC SEUL FOREST.

Activity	**Total Area (Ha) / Number (2001-2006)**	**Area Sampled (Ha)**	**Number of Sites Visited (Primary Audit Activity)**	**Percent[2] Sampled (Primary Audit Activity)**
Harvest	41,711	5,189	35	13
Regeneration	32,818*	6,390	142	19
Site Preparation	9,634	3,635	50	37
Chemical Tending	10,581	1,841	34	17
Special Purpose Account Sites	12,871	2,574	103	20
Free-to-Grow	17,821	3,634	21	20
Areas of Concern[3]	16,583	2,819		17
Water Crossings	92		26	28

* Includes 22,906 ha of aerial seeding on Fire 48 burn site.

This audit report includes a description of the audit process and a discussion of findings and conclusions. Recommendations are provided to address identified deficiencies in forest management and/or associated processes that require corrective action. A recommendation must be dealt with in a formal Action Plan developed by the OMNR within 2 months of receipt of the final audit report. When provided, suggestions are directed at less serious issues and simply provide advice for improvement. A "best practice" highlights a management practice or level of performance that we felt was exceptional.

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[1] Percent sampled represents the location of primary audit activity. In addition to the primary audit activity all additional silvicultural, protection and construction activities on that site were also inspected. For example, a site selected primarily to audit planting activities was also inspected for associated chemical tending, culvert construction etc.

[3] A significant number of AOCs on the forest are linear features (e.g. riparian areas, moose aquatic) as opposed to point features (e.g. nest sites). For this reason most of the assessment was area based and observed via helicopter. AOCs on supplementary aerial photography were also measured.

2.2. Forest Management Context

The Lac Seul Forest is an amalgamation of the former Lac Seul and Sioux Lookout Forests which became effective July 17th, 2002 with an amendment to the Sustainable Forest Licence. McKenzie Forest Products Inc. (MFP) administers forest management planning and activities on the Forest under Sustainable Forest License (SFL), # 542455 in accordance with approved OMNR policies and procedures. The 2001-2006 Forest Management Plan (FMP) was produced in anticipation of the amalgamation of the Lac Seul and Sioux Lookout Forests and was completed under the requirements of the *Crown Forest Sustainability Act (CFSA)* and the *Forest Management Planning Manual (FMPM 1996)*.

The McKenzie Forest Products sawmill and head office is located in Hudson, while woodlands operations are managed from an office located in Sioux Lookout.

Ten independent traditional operators conduct harvesting operations on the Forest.

2.2.1. Map of Management Unit

Figure 1 shows the location of the Lac Seul Forest.

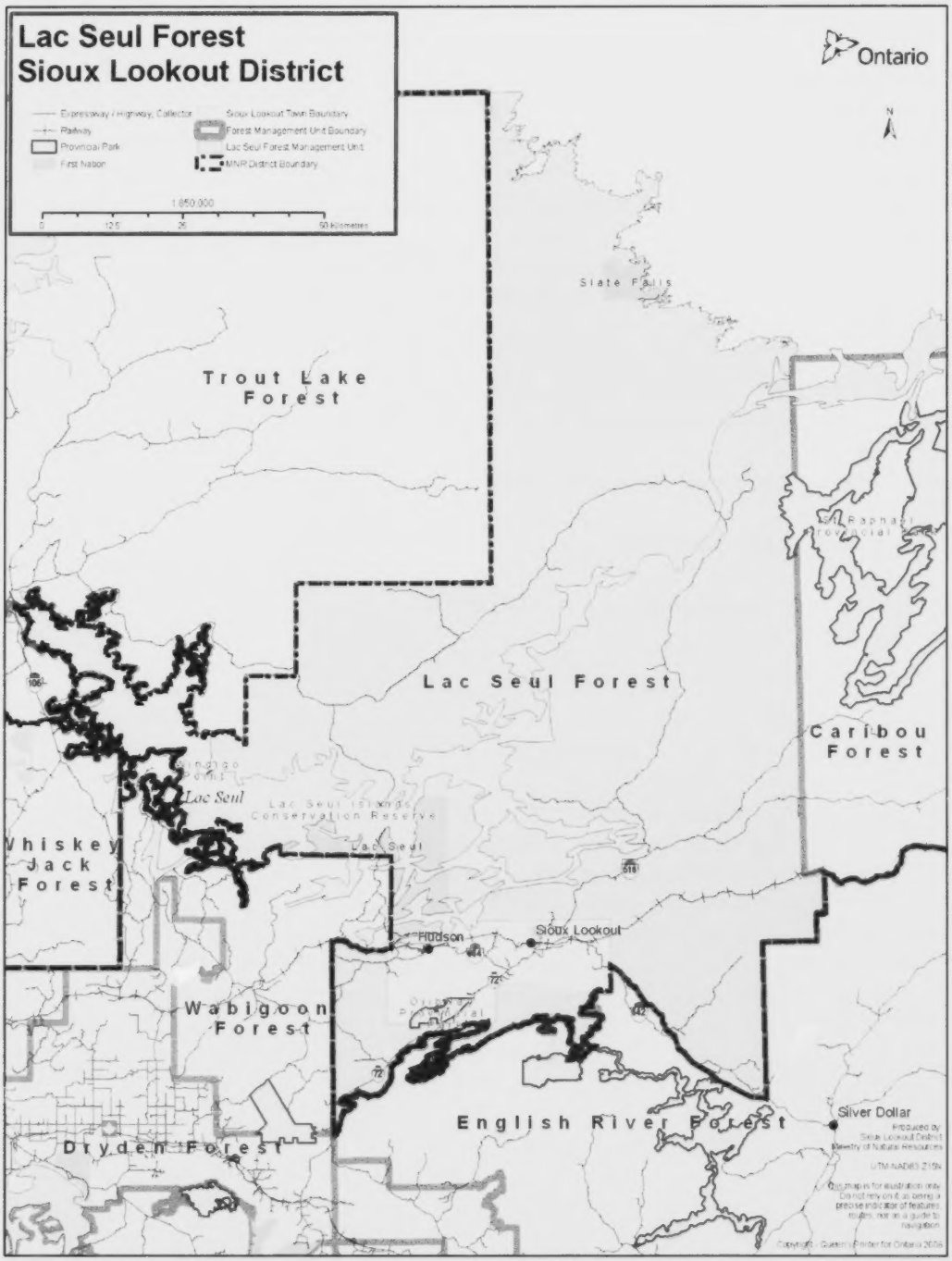

FIGURE 1. LAC SEUL FOREST.

2.2.2. Description of the Management Unit

The Forest encompasses almost 1.1 million hectares. As shown in Table 2, the majority of the managed Crown land is comprised of production forest (682,439 ha or 77%). Non-productive forest land occupies 69,991 ha. Figure 2 presents an area summary of managed Crown land on the Lac Seul Forest.

TABLE 2. CROWN MANAGED LAND TYPE SUMMARY – LAC SEUL FOREST

Land Type	Area (Ha)
Non-Forested	3,166
Non-Productive Forest Land [A]	69,991
Protection Forest [B]	9,132
Forest Stands	623,829
Barren & Scattered Not Satisfactorily Regenerated Land	58,610
Productive Forest Land [C]	682,439

Source: Comparison and Trends Analysis of Planned vs. Actual Forest Operations Report

[A] Non-productive Forest is considered incapable of growing commercial timber crops.

[B] Protection Forest includes forest growing on environmentally sensitive areas and islands.

[C] Productive Forest Land is land capable of growing commercial timber crop and includes Forest Stands as well as Barren & Scattered and Not Satisfactorily Regenerated Land.

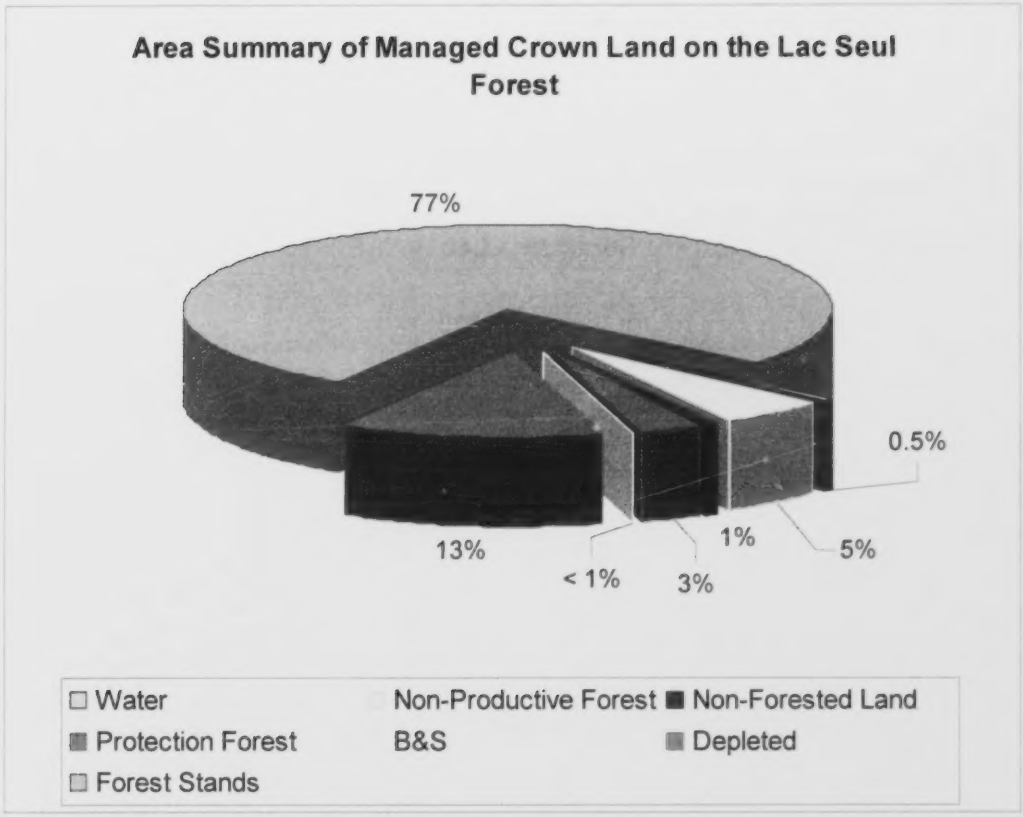

FIGURE 2. AREA SUMMARY OF MANAGED CROWN LAND ON THE LAC SEUL FOREST

The Municipality of Sioux Lookout (includes Hudson and Alcona) is located within the Forest as are the First Nation communities of Lac Seul in the west (primarily islands in Lac Seul) and Slate Falls in the northeast. The Cat Lake First Nation is adjacent to the northern boundary and the community of Ear Falls is west of the Forest.

Lakes are the predominant feature on the landscape. The Forest includes within its boundaries the two major water systems; Lac Seul in the center and Lake St. Joseph-Cat River in the northeast. Consequently there is significant recreational use by commercial and non-commercial users. Most of the access within the Forest is primarily by forest access roads.

The Forest is situated within the Boreal Forest Region. Figure 3 presents the proportional representation of forest types (units). Spruce forest units dominate occupying 304,831 ha. Black spruce is found on sites ranging from imperfectly drained lowland sites to shallow upland deposits to deep loamy sites. On poorer sites it is typically found in pure stands, while on sites of higher productivity it is found in association with poplar, jack pine, white spruce, balsam fir and white birch. Jack pine forest units occupy 173,063 hectares. This forest unit is most common on well-drained coarser textured soils, in pure stands and in associations with black spruce and poplar. Trembling aspen is the major

deciduous species occurring in both pure stands and mixedwood associations (45,175 ha). White birch is also well represented. Red pine is relatively rare (322 ha) as it is at the northern extent of its range.

The northern part of the Forest shows natural fire origin forest patterns with large areas of pure jack pine and spruce forests. Smaller areas of fire origin poplar stands occur throughout the landscape. Balsam fir stands are located on islands and other areas unaffected by fire.

The southern part of the Forest reflects conditions associated with past logging where there was not follow-up silvicultural treatment, or fire origin stands which were not logged. Currently harvesting and silvicultural programs are being implemented in these fire origin stands.

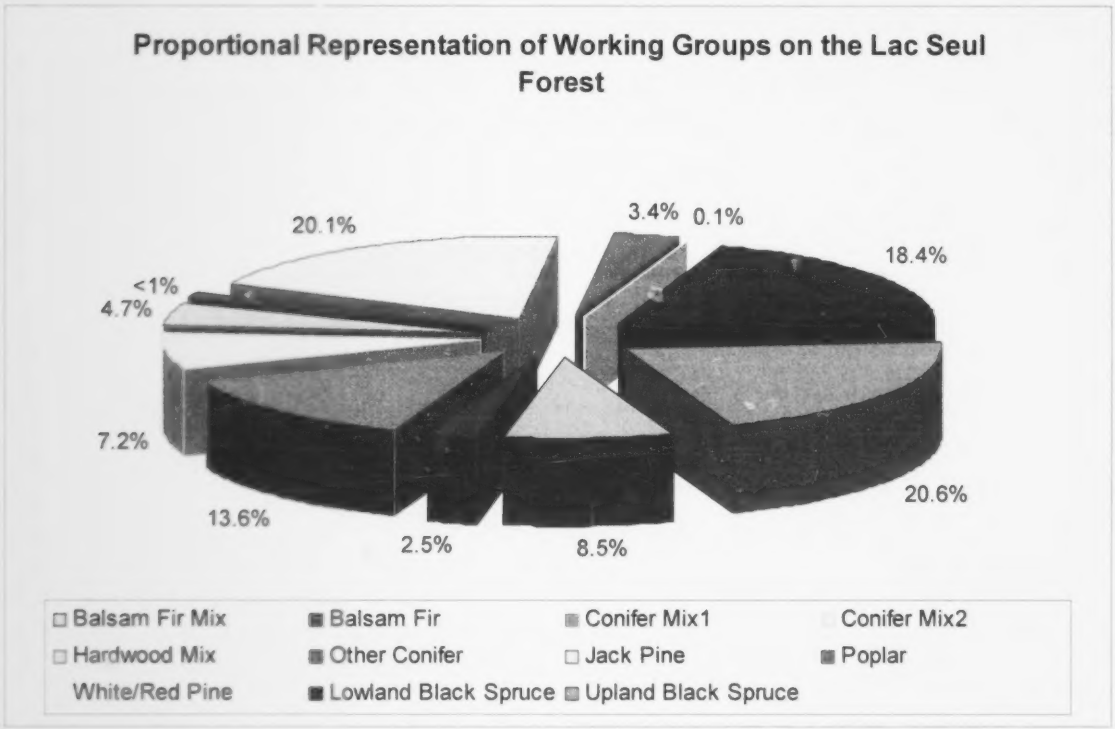

FIGURE 3. PROPORTIONAL REPRESENTATION OF FOREST WORKING GROUPS ON THE LAC SEUL FOREST

Figure 4 presents the age class distribution of the managed Crown forest. The current age class distribution is skewed towards older age classes as a result of active wildfire

suppression. Figure 5 shows the age class distribution by working group. An age class imbalance also exists within the 41-60 and to a lesser extent 21-40 age classes due primarily to natural disturbances and past fire suppression activities. This age class imbalance may present challenges for the maintenance of a consistent wood supply and desired levels of wildlife habitat in future time periods. Forest management activities such as pre-commercial thinning, careful logging practices, and a balance of harvests in older age classes are planned to address this issue.

With respect to specific working groups, the age class distribution of the Jack Pine forest unit is in relative balance and no supply shortages are anticipated. Potential wood supply issues do emerge with respect to age class imbalances for spruce, hardwood, and red pine forest units. The area in spruce forest units is mostly in older age classes (between 61 and 120 years of age). The area of hardwood forest units tends to be concentrated between 60 and eighty years. These imbalances are expected to lower wood supply in future plan terms. Red and white pine forest units are minor components and the age class distribution is under represented in the 21-60 age class. This situation presents challenges with respect to meeting targets for the provision of old-growth pine and the provision of a sustainable supply of logs for log home building.

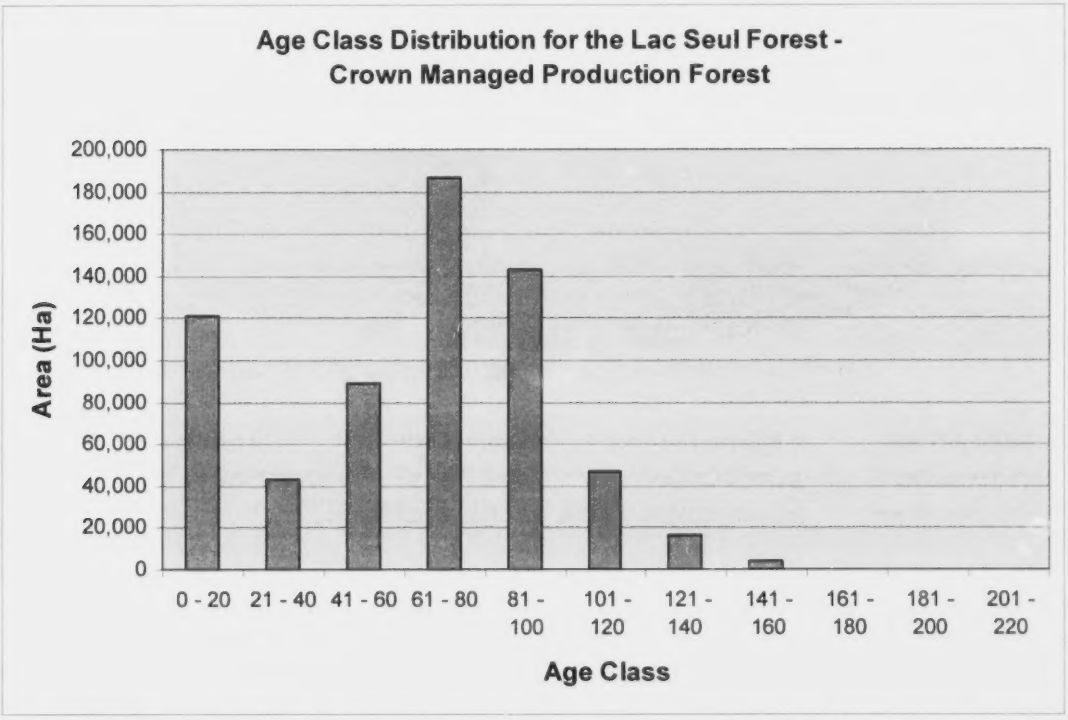

FIGURE 4. AGE CLASS DISTRIBUTION ON THE LSF

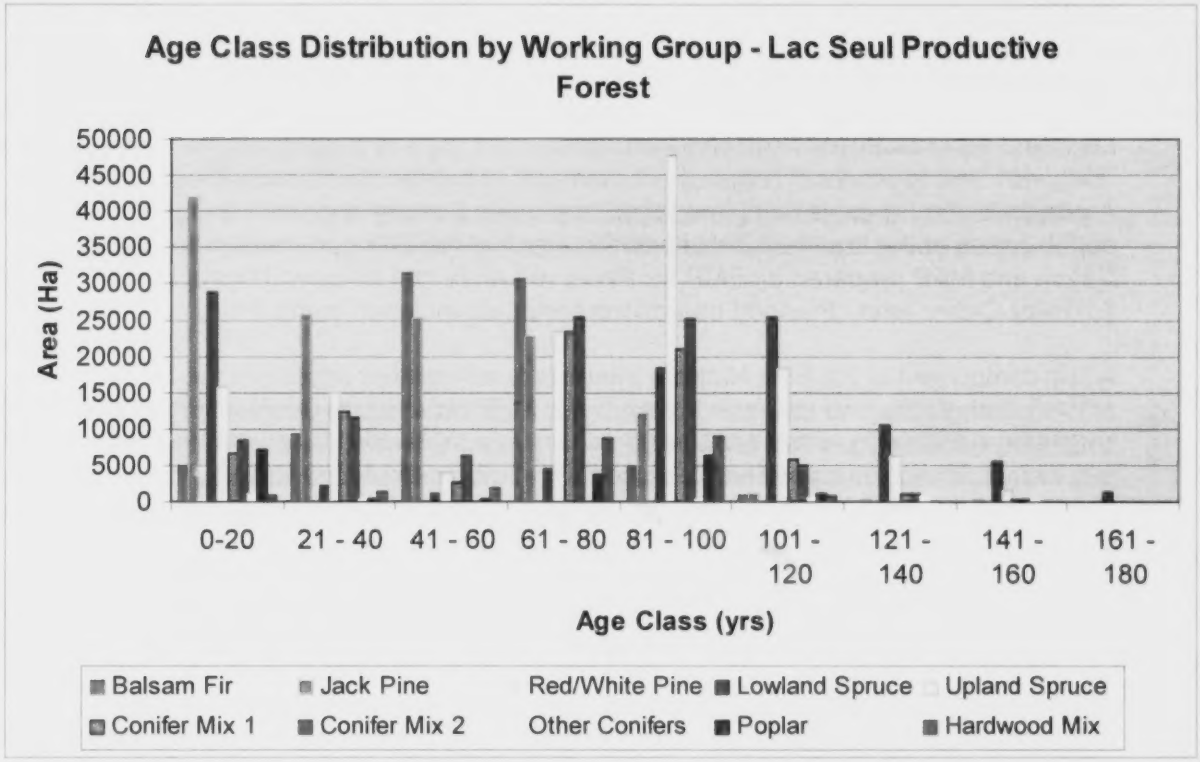

FIGURE 5. AGE CLASS DISTRIBUTION BY WORKING GROUP ON THE LSF

2.2.3. Forest Management Issues

During the audit period the 2001 FMP was implemented and the 2006 FMP was being developed (i.e. planning, consultation, etc). The IFAPP requires that forest management planning issues in the current FMP be identified in this section of the audit report. Accordingly, the following summarizes forest management issues that were identified by the Plan Author in the 2006 FMP. In the FMP issues section the Plan Author identified *"…problems, issues and opportunities…"*.

Since the 2006 FMP was not implemented during our audit we were unable to comment in detail on all the identified issues. They will be addressed during the next Independent Forest Audit. However, some of the identified *"…problems, issues and opportunities…"* were prevalent in the implementation of the 2001 FMP, and where these issues are relevant to our audit findings they are discussed in the appropriate sections of this report.

Issues identified by the Plan Author included;

Wood Supply

The Forest supplies approximately 40% of the fiber requirements for the Hudson Mill. The Company relies on major fiber exchange agreements with area pulp and paper

mills to meet its needs. The existing skewed age class distribution and issues related to access to Working Circle 3 will affect wood supply on the Forest. Long term declines in conifer supplies are expected to occur.

Lac Seul First Nation's Forestry Initiative

A portion of the Forest is being managed to provide forestry and other economic opportunities to the Lac Seul First Nation in proximity to their community. Lac Seul First Nation and MFP prepared an FMP for Reserve Lands and an operational plan for adjacent Crown land. Planned operations areas are included in this Plan.

A key component of the First Nation's interests is all-weather access to the communities of Whitefish, Kejick and Reserve Island. It is a MFP objective to develop a road with causeways and bridges that provide for access across flooded lands of Lac Seul. Access requirements and issues will be discussed with the Lac Seul First Nation.

Forest Management North of the Brokenmouth River

Referred to as Working Circle 3, access to the north of the Brokenmouth River has been prevented (since the 1980's) due to issues between remote tourism, forestry development and First Nation concerns. MFP and the Slate Falls First Nation signed a Memorandum of Understanding in 2000 that included access and forestry agreements. The Slate Falls Road has a number of use restrictions for company operations. Approvals for wood supply allocations are contingent on successful negotiations between MFP and the Slate Falls First Nation. Those negotiations directly impact the ability to harvest allocated areas in the 2006-2026 FMP.

Maintaining the Boreal Forest Landscape

This issue is essentially related to the harvest and renewal of spruce budworm damaged stands. Budworm infestations have resulted in extensive mortality of balsam fir in the southern portion of the Forest where that forest unit represents approximately 21% of the land base. Budworm damaged stands represent a significant fire risk.

The reduction of the balsam fir component in balsam forest unit stands has made many of the stands marginally economic or uneconomic to harvest and renew. These stands are now succeeding to mixed conifer, hardwood, pine and spruce forest units. In order to rehabilitate stands to pre- budworm disturbance species, funding will be required to offset the cost of access and high renewal costs. The use of salvage harvest rates would allow for harvest operations within damaged stands and prescribed burning is an effective and economic site preparation option. However, since many of the areas are in close proximity to Sioux Lookout, recreational cottages and/or tourist camps the potential risks and liability associated with burning has severely hindered development of a prescribed burning program.

Natural Disturbance Emulation

The northern portion of the Forest has had minimal fire suppression and human intervention. However, the southern portion has an unnatural species composition and landscape pattern as a result of early harvesting practices (including the implementation of the moose guidelines which served to fragment the forested landscape) and intensive fire suppression. Allocations within the southern portion of the Forest do not reflect the natural forest condition. Funding will be required to rehabilitate these areas to their full productive capacity.

Road Access

Road access for forest management has a long history of conflict involving local residents, First Nations, and remote tourism operators. First Nations desire economic opportunities, but remain concerned about the impact of road access on environmental, cultural, and social values. Without access, MFP cannot remain economically viable.

A secondary issue for forest management is the ongoing maintenance responsibility and liability associated with abandoned roads on the Forest.

Forest Inventory Products

The 2006 FMP is the first plan prepared using the new 1997 FRI projected in NAD83. The older 1983 inventory along with the 2001 FMP and associated depletion and silviculture records will be converted to NAD83. There is not a perfect conversion method to make the transfer and the results will not be perfect.

The Stewardship Inventory for the Forest was due for completion one year following approval of the 2001 FMP. It was delayed due to errors in the 1997 FRI. The completed inventory was delivered prior to Stage 1 of the 2006 FMP. The next stewardship inventory is due April 1, 2007. Fewer problems are anticipated for all parties because they will not be dealing with a new inventory.

The Amalgamation of Management Units

The Lac Seul Forest was created by the amalgamation of the former Lac Seul Forest and Sioux Lookout Forests in July, 2002. The former Sioux Lookout Forest included the former Sioux Lookout Crown Management Unit and Abitibi Block 9 Management Unit. The three former management units had different planning cycles and data standards, which created significant challenges in the development of the Report of Past Forest Operations (RPFO).

Mapping of Stream Locations

Field operations have been delayed (e.g. amendment approvals) in the past due to incorrectly mapped and unmapped streams. The Action Plan for the 2001 IFA committed

to a verification of streams during the stewardship and planning inventories because of systemic inaccuracies in the OBM. As well, MFP and OMNR committed to streamlining operations by working with a local protocol when incorrectly mapped and unmapped streams are encountered during field operations.

Managing for Wildlife Habitat near Slate Falls

The Slate Falls First Nation traditional area includes the northern part of the Lac Seul Forest. The community prefers smaller harvest blocks to lessen the impact on aesthetics and enhance hunting/trapping opportunities. There is a need to balance this concern with the overall direction to manage for caribou habitat and emulate the natural boreal forest.

Remote Tourism Industry

Remote tourism is a significant economic presence on the Lac Seul Forest. The Guide to Resource Stewardship Agreements provides the opportunity for tourism operators to negotiate a Resource Stewardship Agreement with McKenzie Forest products. The process enables the Company and affected tourism operators to develop signed agreements to address specific issues in a specific area. There is an "Issue Resolution" process that can be used when negotiations reach an impasse. Satisfying the needs of both the remote tourism and forest industries has always been an issue requiring careful attention and will continue to be so into the future.

Lac Seul Shoreline

Pine ecosystems within the Lac Seul 120m shoreline reserve are deteriorating. The accumulation of forest fuels within shoreline reserves threatens managed stands outside the 120-meter reserve. A strategy is required to manage the shoreline reserve. Negotiations between the OMNR and MFP are ongoing with respect to potential harvest allocations and renewal blocks within specific reserves.

Red & White Pine

The FMP contains strategies to maintain or increase red and white pine and to ensure the sustainability of those ecosystems while permitting a sustainable harvest. It is the northern limit of the range of both species and careful management is required.

Red pine forest units represent less than 1% of the Forest. The red pine allocation has not been fully utilized for a substantial period of time by the two log home builders with the allocation.

Ontario Living Legacy Parks and Protected Areas

Three new Conservation Reserves and one new park have been created within the Lac Seul Forest and withdrawn from the managed land base. OMNR is creating

management plans for the protected areas and there is a potential that those plans could impact on adjacent forest management activities.

Room to Grow

This Ontario Forest Accord Advisory Board report sets out a strategy to identify and address gaps in ecological representation. This is to be contingent on the identification of permanent increases in wood supply for affected companies. MFP maintains that there are no surplus volumes on the Lac Seul Forest based on the uncertain nature of tourism negotiations, access to remote areas and access to shoreline points and peninsulas.

3.0. SUMMARY OF AUDIT FINDINGS

3.1. Commitment

Policy statements must be developed which include the organization's vision, mission, guiding principles, and codes of management practice. The corporate mission and vision must be readily available and reflected in the daily operations on the Forest.

MFP is a member of the Buchanan Forest Products Ltd. (BFPL) and takes its direction from the 2005 BFPL corporate vision and environmental policy. A brief summary of policy content includes:

- Maintenance of a safe work environment.
- Operating in an environmentally sensitive manner.
- A commitment to sustainable development.
- A commitment to conserving existing levels of natural biodiversity.
- A commitment to pursuing mutually beneficial relationships with First Nations.
- Protection of the interests of other resource users from adverse impacts of timber management.
- Acquiring and applying the latest research and technology to forest management.
- Adherence to legislation, regulations, and policies.

MFP is in the process of implementing a formal Environmental Management System (EMS) with the intention of obtaining Sustainable Forest Initiative (SFI) certification. During the field audit staff were preparing for the certification process.

Corporate OMNR has produced a number of strategic directions to deliver on its goals, strategies, and actions. The most recent document is *Our Sustainable Future,* produced

in February, 2005. That document contains a long term corporate vision of a "*Healthy environment through sustainable development*" and a mission of "*ecological sustainability.*" It describes an operating philosophy and contains specific organizational goals:

- A healthy natural environment for Ontarians.
- Economic growth for Ontario communities.
- Public health and environmental safety to protect citizens.
- Stewardship, partnerships, and community involvement.
- Organizational excellence for improved public service.

The goal for economic growth contains a specific strategy for *"improved aboriginal relations through economic development opportunities and partnerships".*

The Company and OMNR had utilized a full range of training methods and materials to ensure employees were fully aware of their responsibilities and capable of carrying them out. Formal courses, presentations and a full range of communication methods (e-mail, bulletins, and formal meetings) were used to ensure staff were aware of the intent, content and implementation.

MFP provided us with a well organized and complete listing of all the training courses available to its employees, as well as a detailed listing of training completed by each individual. Training was specific to the workplace ranging from Workplace Hazardous Materials Information System (WHMIS) through to sustainable forestry (e.g. ecological land classification). We also reviewed a Safety Calendar Summary dating back to 1995 that documented all safety meetings, training, inspections and correspondence. It was the most comprehensive documentation we have encountered in a number of IFAs, representing a priority corporate commitment to education and safety. BFPL has an excellent Operations Handbook that had been distributed to MFP employees. Version 2 of the handbook was produced in December, 2005. The Handbook contains condensed information on a variety of relevant topics including color photographs of species at risk, a water crossing checklist, etc. Operations staff encountered during the field audit informed us that the Handbook was an excellent reference document.

The Lac Seul, Slate Falls, and Cat Lake First Nations are located on, or adjacent to the Forest. We determined that both the OMNR and MFP had displayed a commitment to establishing positive working relationships with the First Nations as discussed in Section 3.2.3.

We conclude that MFP and the OMNR Sioux Lookout District had fully met IFAPP requirements to develop corporate policy and directions related to sustainable forest management. Staff was aware of corporate policies, and reflected them in planning initiatives and daily field operations.

3.2. Public Participation

3.2.1. Local Citizens' Committee

A Local Citizens Committee (LCC) must be established to help the planning team prepare the Forest Management Plan. Membership on the committee is to include local citizens representing a range and balance of community interests.

LCC responsibilities include ensuring the effectiveness of public consultation, assisting with the identification and analysis of management alternatives, participating in the development of values maps, monitoring the implementation of the plan, and providing advice to the District Manager (DM) on plan amendments and issue resolution. Each Forest Management Plan must contain an LCC general statement of agreement or disagreement with the plan.

We reviewed all meeting agendas and minutes for the audit period, met with the full LCC and conducted interviews with individual members. In addition, MFP and OMNR staffs were interviewed about the activities and effectiveness of the LCC.

We note that in 2004, an effort was made to broaden representation and enlist new members in the LCC by placing ads in the local paper encouraging groups and individuals to participate. Letters were also sent to First Nations seeking their participation. No responses were received. Despite the poor response, the current LCC is large, with a total of 16 members listed in the 2006 FMP. At the time of the audit First Nations were not represented (although they had been in the past). A First Nation representative indicated that future participation on the LCC, if any, would be based on their own priorities and timing. All other major stakeholder groups in the Sioux Lookout area had representation.

We found the assessment of the LCC's performance and contributions over the 5-year audit term to be particularly difficult. On the one hand, it was described by every individual we interviewed (including several LCC members) as being operationally dysfunctional. On the other hand, most of the 2006 IFAPP criteria used to measure LCC performance had, at least superficially, been met.

With respect to the first point, we were repeatedly informed that there were serious interpersonal and conflict of interest issues associated with the operation of the LCC. Representatives from the OMNR, MFP, and the LCC variously described the LCC as at times being "a waste of time" and "dysfunctional". The existence of longstanding problems with the functioning of the LCC was also acknowledged in interviews with both the past and current OMNR District Managers. The results of our investigations fully supported these assertions. Average absenteeism at meetings over the audit term was approximately 42%, ranging from a low of 33% in 2005 to a high of 47% in 2001. Meeting minutes revealed a large percentage of meeting time (over 50% for some meetings) was spent dealing with internal member issues (e.g. interpersonal conflicts, alleged conflict of

interest, etc.). The minutes recorded a significant number of angry disputes between some members. This resulted in the District Manager sending a cautionary letter concerning standards of behavior to one individual.

The minutes, and our interviews indicated that conflict of interest issues (perceived or otherwise) were a recurring theme. We note that, well outside of its mandate, the LCC involved itself in a licence renewal issue affecting one of its members by sending a letter of support to the District Manager (see Section 3.8). The business interests of two long-term LCC members holding licenses to harvest red pine on the Forest are reflected in some of the minutes (e.g. February 2005, June 2005). Conflict of interest concerns were also more broadly related to the fact that all the LCC members, in one way or another had a direct or indirect relationship (business or personal) with MFP or the tourism industry. The potential for conflict of interest is a reality in small northern communities with few major employers. The issue was partially reflected in the decision of the LCC not to support the 2006 FMP. On the Contributors page, under the listing of LCC members it states:

"The Committee wishes that their concerns regarding potential conflict of interest and the need for hasty action be addressed. The committee is fairly evenly split as to whether they generally support or disagree with the plan."

The complete LCC statement in the FMP includes a number of additional issues that affected the LCC's performance. A synopsis of its contents includes:

- Short timelines *"maintains the pressure on the committee to act hastily which is often not the ideal…"*.
- A *"…concern re conflict of interest…"*.
- There is "*… a feeling amongst some members of the committee that MNR staff caters to the major operators on the forest"*.
- Concern that as an advisory committee their impact is limited *"…whereby changes to the plan have to be supported by the District Manager."*.

Our assessment of the situation is that although the Sioux Lookout LCC members (past and present) are experienced, and passionate about forestry and broader natural resource issues, a combination of conflicting personalities, absenteeism, and persistent conflict of interest allegations fundamentally hindered the Committee's performance and contribution. We note these problems had been recognized by the current OMNR District Manager. He had recently:

- Attended LCC meetings to act as a facilitator.
- Initiated a process to remove chronically delinquent members from the Committee.

- Made contact with stakeholder organizations to assess the feedback they receive from their representatives.
- Made it clear that the LCC is advisory in nature, reporting to the DM.
- Initiated discussions with stakeholder groups to limit the length of the term LCC members can serve.

We believe these measures were required and appropriate. The LCC is the DM's committee; he has a responsibility to maintain its integrity, to ensure the committee experience is positive for those who wish to volunteer, and to alter its current negative image. We make the following recommendation to assist him in this task.

Recommendation # 1:

The OMNR District Manager should continue to review the LCC membership, structure, and processes and take action to increase its effectiveness in citizen participation and forest management.

With respect to meeting IFAPP requirements, we note the LCC statement acknowledges the efforts of OMNR and MFP by stating that presentations were "*...extremely valuable to the committee's understanding and knowledge of the process...*". We determined that the OMNR and MFP were very diligent in ensuring that all FMPM requirements with respect to LCC communication and information requirements were met. For example, there was a recent LCC Terms of Reference (approved by the OMNR District Manager in April 2006). To a greater or lesser extent, the LCC was informed and involved in the analysis of management alternatives, the review of values maps, Annual Work Schedules (AWS), Annual Reports (AR), access plans, amendments, and compliance issues. LCC members were involved in the FMP Information Centers. There was an LCC member on the Planning Team (2006 FMP) and there were joint meetings of the two committees. The LCC was informed of the Independent Audit processes (2001 and 2006).

Our review of the minutes and interviews indicated that in many instances the presentation of planning and operational material was overshadowed by internal disputes, and amounted to little more than an information item. In other instances the LCC provided analysis and recommendations to the District Manager. However, in some of those instances the Committee was concerned that its input had "*...to be supported by the District Manager.*" and for many of the presentations and discussions an average 42% of the committee members were absent.

Based on our experience with a number of Independent Forest Audits, we have reached the conclusion that in addition to the real and serious problems with the Sioux Lookout LCC, there are some problems associated with the operation of LCCs in general that are rooted in unrealistic FMPM requirements and corporate OMNR expectations.

LCC members are volunteers, with full private and business lives. Participation on an LCC brings with it extra work, time and educational demands. In small northern communities such as Sioux Lookout, there is a limited base to draw upon for LCC membership, and many additional demands are placed on the same people for participation in a full spectrum of social, business, and charitable committees. Additionally, forest management planning and operations have becoming increasingly complex and time consuming. Policy interpretation and specific planning expertise have, to a great extent, shifted to OMNR regional specialists, and operational direction has increasingly been handed down to the Districts in the form of guidelines and manuals. We have found that many local OMNR and Company staff are confused by the complexity and the amount of information, so it is easy to appreciate the learning curve faced by volunteer LCC members who meet for a few hours each month.

Additionally, OMNR and forest companies have experienced major staff reductions in recent years. Those individuals remaining have less time to respond to LCC information and training requirements. We were informed (and agree) that the LCC has become an extra workload for all involved. LCC activities are frequently performed after hours in addition to normal daily work. We were also informed that funding to manage and support the LCC process will, at best remain stable, or is being reduced.

The sum of these realities is that, in our opinion, LCCs rarely perform to FMPM or OMNR expectations. We believe there is a growing need to adopt a more flexible approach to the FMPM requirements for LCCs. The District Manager should be provided with the flexibility to best utilize the knowledge and skills of available members. In some instances this might very well involve monthly meetings and detailed assessments of management alternatives, amendments, etc; however, in other instances, the LCC may only be asked to provide comment on broader public issues such as road locations, etc., and only meet as required (e.g. quarterly). We were informed by corporate OMNR that the FMPM already provides flexibility to OMNR District Managers with respect to membership and the utilization of LCC abilities. However, our review of the appropriate sections in the FMPM suggests to us that the "flexibility" available to District Managers is not clearly stated. As well, in our discussions with District Managers on a number of IFAs we have not encountered any who indicated that they clearly understood the degree of flexibility they have in the selection and/or use of the LCC. The IFAPP specifically lists FMPM requirements with the expectation that the auditor will provide a recommendation when requirements have not been met.

Recommendation # 2:

Corporate OMNR should provide a clear explanation to OMNR District Managers outlining the flexibility they have with respect to LCC membership, TOR development and the operation of the LCC.

3.2.2. FMP Standard Public Consultation Process

The FMPM requires that public consultation opportunities be provided during the forest management planning process. These opportunities are to include an invitation to participate in the planning process, two public information centres, review of the draft plan, and inspection of the approved plan. The public must be given opportunities to access the OMNR issue resolution process and to request a Ministry of Environment (MOE) "Individual Environmental Assessment (IEA)[4] of a specific proposed forest management activity to the status of an individual environmental assessment.

Public consultation and planning milestones identified in the Planning Team Terms of Reference (TOR) were generally met with the exception of the 1st Information Centre (scheduled for October 2004) that was delayed until January 2005 as a result of difficulties encountered in getting the planning inventory ready for FMP analysis. The TOR was appropriately updated to reflect this change.

Public notices were issued with sufficient lead time and their contents complied with FMPM requirements. An appropriate mix of communications media which included both Cree and English public notices in six local newspapers was utilized. The 1St and 2nd information centres were held at five locations including two First Nation communities. An innovative strategy of hosting community barbecues as part of the 2nd information centres contributed to a dramatic increase in attendance (from a total of 43 at the 1st information centres to 351 at the second centres). Material presented at the information centres was well prepared and comments to that effect were received from the public.

As required by the FMPM, a list of required alterations was available to the public during the public review of Draft Plan and Environmental Registry notices were issued as required.

Inclusion of Resource Access Controls in the 2006 FMP

A major public consultation issue arose between the draft plan review stage and the OMNR plan approval stage regarding the incorporation of access controls into the FMP. Access controls which had been approved in previous plans and were to be continued in the 2006 plan were inadvertently omitted from the draft plan presented to the public. In addition, decisions regarding some new access controls were not made until after the draft plan review stage (due to timing requirements of tourism-forestry industry negotiations and the finalization of related dispute resolution processes). This presented a problem as to how to include these new access controls in the plan when the public review of the draft plan had already occurred.

From our discussions with the OMNR, MFP, and an LCC representative it is our understanding that the OMNR informed the LCC about the dilemma regarding incorporation of access controls into the plan. LCC representatives expressed concern

[4] IEAs are also commonly referred to as "bump-up" requests.

about including access controls in the 2006 plan without adequate opportunity for public comment at the draft plan review stage.

Following additional discussions and correspondence, the OMNR Regional Director (RD) ruled that it would be inappropriate to approve access controls not viewed by the public. The RD directed that the access controls be removed from the plan before it was submitted for his approval, and directed that the proposed controls would have to be presented to the public for review according to the full requirements of the FMPM. The results of the review would be amended into the 2006 FMP. The RD then approved the FMP, with access controls removed, on January 31st 2006. We are of the opinion that the RD's decision was warranted and appropriate.

The public review of the proposed access controls had occurred prior to the field audit, the OMNR had responded to comments received, and a major amendment of the 2006 FMP was being prepared.

We are satisfied that this issue is being dealt with appropriately and in accordance with the requirements of the FMPM.

Issue Resolution and Environmental Assessment Act (EA Act) Individual Environmental Assessment (Bump-up) Procedures

Opportunities for accessing the issue resolution and individual environmental assessment processes were identified in public notices and in separate mail outs to affected parties. There were several issue resolution requests made during the preparation of this plan and the required 2004 FMPM Issue Resolution Process was followed.

Two requests to the Minister of the Environment (MOE) asking that the Minister of Natural Resources be required to prepare an Individual Environmental Assessment were received during the 30-day inspection period following the approval of the 2006 FMP.

The 2004 FMPM requires a response by OMNR to MOE within 15 days from the date when MOE informs OMNR of the bump-up request. OMNR's response to MOE's notification was provided 35 days (which included a 10-day extension) after MOE's notification. We feel that this response time was reasonable.

The 2004 FMPM also indicates that the decision of the Minister of the Environment will normally be made within 45 days of the receipt of all the information from OMNR. At the time of the field audit no response had been received by OMNR from MOE. This was approximately three and one-half months beyond the expected response date. In our opinion government agencies have a responsibility to adhere to their own deadlines.

We have been informed by the OMNR that they have made the MOE aware of the implications of delayed decisions and that MOE is working on streamlining its decision-making process regarding individual EA requests. We remain concerned however,

about outstanding EA decision delays related to this and other FMPs. It is important that the OMNR continue to make MOE aware of the issue and its implications.

Recommendation # 3:

Corporate OMNR should continue to encourage corporate MOE to provide a decision on the two outstanding EA bump-up requests.

Resource Access Issues

Resource access issues on the Lac Seul Forest, like many others in Ontario, are a primary public concern related to forest management. The issues have a direct effect on the delivery of forest management and on the social and economic well being of communities and people in the planning area.

Access related issues surfaced continually during our discussions with resource users, MFP and OMNR and included:

- First Nations' aspirations for access related to economic development.
- The conflicting access interests of recreational use and remote tourism operators.
- Decommissioning of some roads for caribou management.
- Responsibilities of the Ontario government and forest industry for road use liability and long term management including road abandonment.
- The need to ensure harmonization of OMNR's various road management guidelines.

Access issues have resulted in many hours of discussion and negotiation for OMNR, forest companies and other resource users, mistrust among affected parties, and frequent use of time-consuming and costly dispute resolution and EA bump-up processes. The issues threaten to grow in frequency and severity as the number of resource users grows, and the amount of land allocated to various uses increases.

We recognize that resource access issues are very complex and that solutions have been elusive despite the expenditure of considerable effort by many parties.

We note that the OMNR Northeast Regional Advisory Committee (RAC) produced a 2005 report "*Resolving Access Issues: A Case Study*" with recommendations concerning similar road access issues in the Wawa area. The report included recommendations for:

- Better resource inventory information and broader based (larger than a forest management unit) roads planning.
- Broader based tourism policy (to include road-based tourism, ATV's, and snowmobiling).
- Enhancement of Crown land recreational use and planning.
- Improved leadership including amalgamation of LCCs, better LCC training broader representation on the LCC, and strong LCC leadership.
- Re-visitation of current land use policies.
- Better understanding of a common knowledge base for all parties.

In our opinion, the RAC report provides worthwhile advice to the OMNR and we suggest that it can be used to make progress in the area of enhanced recreational access planning. We understand that initiatives are being undertaken to attempt implementation of the RAC recommendations.

Suggestion # 1:

The Sioux Lookout District and MFP should familiarize themselves with the implementation of the 2005 Northeast Regional Advisory Committee Report on resource access to determine if any of the results can be applied to the Lac Seul situation.

3.2.3. Native Peoples' Consultation

The FMPM requires that native communities be provided with the option to choose an additional consultation and documentation opportunity with respect to forest management planning, referred to as the Forest Management Native Consultation Program (FMNCP). In addition, OMNR District Managers are required to conduct negotiations with native communities to identify and implement ways of achieving more equal participation by Aboriginal peoples in receiving benefits from forest management.

There are three First Nation's Communities located on or adjacent to the Forest. These are the Slate Falls First Nation, Lac Seul First Nation, and the Cat Lake First Nation.

All three First Nations received a separate "invitation to participate" in forest management planning and were provided with the opportunity to choose between the standard consultation process and the Forest Management Native Consultation Program (FMNCP). None of the communities chose the formal FMNCP. However, the Lac Seul and Slate Falls First Nations were directly involved in the planning process based on direction and requirements they determined for themselves.

The Slate Falls First Nation communicated directly with MFP with respect to determining harvest and road construction intentions. At the Band's request OMNR and MFP conducted a special open house in the community. The Chief and community representatives participated in the second Information center in Sioux Lookout and requested a similar event in their community. A second open house was held in the community and a number of comments were received. The dominant issue was the construction of an all-weather access road to the northern portion of the Forest and to the Slate Falls community. The First Nation wanted a road and forestry opportunities but initially it did not want harvest allocations developed north of the community until the road was actually completed. At the time of the FMP development the road had not been completed; however, MFP required the inclusion of harvest allocations in the FMP for review and approval. An agreement was developed whereby MFP included allocations north of community in the 2006 FMP, while negotiations continued on a forestry agreement with the Band. At the time of the field audit an agreement had been signed between MFP and the community to harvest approximately 500 ha.

Lac Seul First Nation has three primary settlement areas, Frenchman's Head, Kejick Bay, and Whitefish Bay. The Lac Seul First Nation chose to be involved in forestry through a Memorandum of Understanding (MOU) with the Company and the federal Department of Indian Affairs. One aspect of that initiative involved the Company and Band working together on the development of a forest management plan for a small area of Crown lands landlocked by reserve boundaries. The Company developed the technical and operational aspects of the plan (modeling, operational prescriptions) and the Band developed the goals, and plan text. The Band conducted its own consultation program (community open houses) and also conducted its own broader public open house shortly after the regular second Information center for the Lac Seul FMP. Company and OMNR staff were invited to participate in that open house to answer public questions. At the time of the audit, we were informed by a Band representative, that the final draft of the plan had been completed; however, it had not yet been released. A forestry MOU was still being negotiated between the Company and the First Nation. OMNR staff indicated that an Overlapping Licence would be issued for the Lac Seul First Nation when the MOU and plan were completed. In addition, the Band has developed a FMP for its Reserve lands. We determined that a draft FMP had been completed; however, outstanding payments to the plan author had delayed its release. The Lac Seul First Nation has also had a harvesting contract with MFP for many years.

We note in an April 6th, 2005 letter from the Chief of the Lac Seul First Nation to the LCC that he states: "...we have a good relationship with McKenzie Forest Products, substantially better than other companies that we have tried to work with." He further states: "...we have a positive and close working relationship with McKenzie Forest products. One example of this is that we have a sub-office located in the Sioux Lookout Office, where our forestry technician works on a daily basis ...". We observed a First Nation forestry technician working at the MFP office during the field audit.

The Cat Lake First Nation decided not to become directly involved in the FMP process until planned forestry operations came closer to their community. The community has

raised objections to any all - weather road access in the vicinity of the community. Negotiations are ongoing with MFP.

All FMPM requirements for Native Background information, and protection of values were prepared and delivered to the communities. The OMNR had completed all required reporting of communications and actions with First Nations. District Reports for the 2003 – 2005 periods for Forest Management Class EA Condition 34 summarized negotiations with native communities to increase aboriginal benefits from forest management. The reports summarized activities and progress. Some interesting facts include:

- Lac Seul First Nation has had a harvesting contract with MFP for many years.
- Twenty five percent (25%) of the workforce at the Hudson sawmill is aboriginal.
- Training opportunities in ferry operations and forest management are part of MFP and Lac Seul contractual arrangements.
- OMNR and MFP conducted numerous meetings with First Nations across the District to provide information, resolve issues, and encourage participation in forest management and other employment ventures.
- Slate Falls owns the Bamaji Corporation that has joint ownership in a remote tourism operation.

Our assessment is that OMNR and MFP have met all requirements with respect to First Nation consultations and efforts to involve native peoples in forest management. MFP is to be congratulated for its proactive and relatively successful efforts to involve First Nations in forest planning and operations.

3.2.4. Annual Work Schedule Public Inspection

The FMP Annual Work Schedule (AWS) is produced every year to guide the implementation of operations. It lists operations which were approved in the FMP and are scheduled for implementation for that year. The LCC and the public must be given an opportunity to review the AWS.

All AWSs were reviewed by OMNR district staff and by the LCC. All 1996 FMPM and 2004 FMPM requirements for public Notices of Inspection of the approved AWS and aerial herbicide, prescribed burns were met. No pest management programs were planned.

3.3. Forest Management Planning

3.3.1. Planning Team Activities

The FMPM requires that the District Manager appoint the chair of the planning team. The team is to be chaired by the Plan Author who must be a Registered Professional Forester

(R.P.F.). The team must represent a wide range of natural resource expertise. A Terms of Reference must be developed by the Plan Author and approved by the OMNR District Manager and the Regional Director. It must identify the tasks required for the preparation of the plan and identify the responsibilities of planning team members. A detailed timeline must be established. Planning team members must be available to answer questions from the public.

The 2006 Lac Seul FMP planning team was appointed by the District Manager (DM) and had a comprehensive Terms of Reference approved by the DM and the Regional Director. The team consisted of foresters, and environmental planner, biologist, forest analysts and an LCC representative. Other areas of expertise required for planning (e.g. parks, lands administration, fire management, and compliance) were provided by an extensive list of plan advisors drawn from Sioux Lookout District, the NW Region OMNR, and MFP. An FMP Steering Committee was also established, led by the MFP Woodlands Manager, and the OMNR District Manager.

The Plan Author was a Registered Professional Forester (R.P.F). The planning team had co-chairs (OMNR and MFP), one of which was an R.P.F., the other an associate member of the Ontario Professional Foresters Association.

A review of the planning team minutes, task team reports and interviews with team members demonstrated that planning team meetings were well attended, discussions were thorough and open and the planning team was provided with appropriate background information material. Except for an initial delay in the date of the 1st Information Centre (discussed in Section 3.2.2) the FMPM format of the planning and public consultation process was followed, including adherence to the timelines in the Terms of Reference.

Planning team meetings were well attended and occurred frequently during the first 14 months of planning (9 meetings). In the last 8 months of planning, formal planning team meetings were infrequent; however, we did find evidence that meeting frequency of the various task teams increased to meet planning deadlines. Also during the latter part of the planning period, the FMP steering committee met much more frequently to provide direction and support.

We find that the planning team and its task teams functioned efficiently and note that the Steering Committee support to the planning team was highly beneficial.

The Terms of Reference required that meeting minutes be kept. However, planning team minutes often consisted only of handwritten notes, and could have been more consistent, and better documented. Improved minutes would have helped in our assessment of the planning team's functioning (e.g. number of meetings, meeting quorums, dissenting opinions and whether these opinions were addressed in the plan). Improved minutes would also serve to better document planning decisions and provide reference material for future planning teams.

Suggestion # 2:

The OMNR and MFP should ensure that future FMP Planning Committees maintain adequate minutes of meetings and deliberations.

Through interviews with tourism interests, the forest industry, LCC members, OMNR staff and the review of the correspondence file, it was evident that the public had ample opportunity to provide input into the planning process. A 10% sample of the FMP correspondence summary indicated that correspondence was well documented and responses were complete and on time.

While improvement was needed in the recording of planning team minutes, we are of the opinion that the process to produce the 2006 Lac Seul FMP was well organized, efficient, and met FMPM requirements.

3.3.2. Resource Stewardship Agreements

Every FMP must include a statement confirming a commitment to maintain the viability of the tourism industry and to establish a level of remoteness as recognized in the Tourism and Forestry Industry Memorandum of Understanding (MOU). Every reasonable effort must be made to pursue the development of Resource Stewardship Agreements (RSA). RSA provisions that directly affect the FMP must be incorporated into it.

We found that during the preparation of the 2006 FMP OMNR and MFP worked on the development of Resource Stewardship Agreements consistent with the intent of the "Guide to Resource Stewardship Agreements", and the "Management Guidelines for Forestry and Resource-Based Tourism".

The FMP objectives and related strategies confirm a commitment to maintain the viability of the tourism industry. MFP was provided with a list of resource-based tourism establishments and sent out letters inviting all licensed resource based tourism establishments to become involved in the RSA process. MFP kept a comprehensive file of correspondence and discussions with individual tourism operators, government agencies and other parties. The OMNR provided a scoping session for tourism operators, provided updated tourism values map and included it in FMP supplementary documentation. The Ministry of Tourism and Culture provided a facilitator to assist in RSA discussions.

Despite the considerable efforts by all parties, only one RSA was negotiated with a licensed outpost operator. Several other lodges and outpost operators (approximately 17) did negotiate agreements to reduce forest management impacts on tourism operations, but these were not done according to the full RSA format as outlined in the "Guide to Resource Stewardship Agreements".

The RSA process did result in changes to the tourism values maps, AOCs and Road placement. With the exception of decisions regarding some new access controls that were not able to be made until after the draft plan review stage (discussed in Section 3.2.2.) changes resulting from RSA discussions were included in the FMP.

Issues Related to RSA Development

In our recent experience with this and other IFAs, we have found that very few RSAs are being signed in the format suggested by the "Guide to Resource Stewardship Agreements". In our view this circumstance is the result of timing issues and the complexity of the RSA process.

There appears to be a timing issue relative to the development of an FMP and RSAs. Table 1 page 20 of the "Guide to Resource Stewardship Agreements" presents an idealized 29-month timetable for the development of an FMP and RSAs. The timetable encourages early negotiation of RSAs so that the agreements can be ready prior to the 1st FMP public information centre at month 14. A provision is made for "late RSAs to be ready as late as month 18 in time for the 2nd public information centre". The timetable identifies that the draft FMP needs to be submitted to OMNR at month 20 to 23 so that the public may review it by month 25 to 28.

It is our understanding that remote tourism operators and forest management companies are only able to undertake "serious" negotiations after harvest areas and proposed road corridors are formally identified at the FMP 2nd information centre (week 18). This means that RSA negotiations only have 2 to 5 months during a very busy period in the planning process for completion in time for inclusion in the draft FMP. Many of the potential RSA issues are not resolved in that short a period of time. The timing issue is made worse if a dispute resolution process is required due to lack of agreement.

In the case of the 2006 Lac Seul FMP, MFP initiated the RSA process early (September 10, 2003) as suggested by the "Guide to Resource Stewardship Agreements" and they and Sioux Lookout District worked diligently toward the signing of RSAs. However the constraints discussed above, and in the following paragraph, hindered the completion of RSAs according to the full RSA format.

Appendix 2 of the "Guide to Resource Stewardship Agreements" outlines the contents of a typical Resource Stewardship Agreement. From our discussions with forestry companies, tourism companies and OMNR in Sioux Lookout District and elsewhere, we understand that the complexity and 'legalistic' nature of the typical agreement is intimidating to the participants. As a result, tourism operators usually opt for a less formal agreement based on specific forest operations and related planned access that directly affects their tourism enterprise. These less formal agreements are usually short term and always are much simpler in format than a formal RSA. The widespread use of this alternative (in the Lac Seul case 1 RSA and 17 "other" agreements) makes us question the value of the amount of effort spent on the RSA process in its current form for the limited results achieved.

Recommendation # 4:

Corporate OMNR should lead a review of the RSA process as outlined in the "Guide to Resource Stewardship Agreements" to determine if its effectiveness and efficiency can be increased.

3.3.3. Sources of Direction

A list of manuals, guidelines, policies, directives and administrative procedures was made available to the planning team as required. The forest management plan objectives were prepared in accordance with the requirements of the FMPM, and addressed forest diversity, sustainable social and economic benefits, silviculture, and the provision of forest cover for those values and species dependent on it. Management objectives were established within the context of broader direction in legislation, policy, regional strategic direction, local land use, and resource management direction. We determined adherence to these directions was reflected in the AWS and field operations.

3.3.4. Introduction

The plan introduction contained a properly prepared and signed statement of how OMNR's Statement of Environmental Values (SEV) under the Environmental Bill of Rights was considered in the preparation of the Plan. As required, an index to the environmental assessment components of the plan was included.

3.3.5. Management Unit Description

The description of the LSF in the 2006 FMP met FMPM requirements. Description tables adhered to the required formats, and included information about the administration, geology, current forest condition and other forest resources. Social and economic information was provided for both the Municipality of Sioux Lookout as well as all of the other dependent communities. An estimate of landscape processes for net primary productive was also provided. The Forest Resources Inventory was updated as required and met the Forest Resources Information (FIM) manual requirements. The development of an accurate planning inventory required considerable effort by both OMNR and MFP staff. All depletion, renewal, free-to-grow and road records had to be re-projected (i.e. converted from North American Datum (NAD) 27 to NAD 83) in order to update the 1997 inventory to 2006. This process was complicated by many factors including different standards for the interpretation of forest units in the new FRI, Geographic Information System (GIS) coding issues and information gaps.

Our review of the 2006 FMP indicated that the full range of non-timber values, including cultural heritage sites, native values and critical wildlife and fisheries habitat were described in the text, along with the appropriate guidelines and manuals that provided direction on protection and mitigation. The Plan utilized the coarse and fine filter

application of guidelines. The coarse filters captured the broad array of species by maintaining a diversity of forest conditions and the fine filters ensured that no species was missed because of specialized requirements. We determined that the FMP contained a full description of locally featured species, as well as those that are rare, vulnerable, threatened, or endangered. It provided objectives and strategies to support wildlife and fisheries, as well as information on the status of habitat for different species. Detailed maps described the preferred habitat for various species based provincial guidelines and manuals.

Values maps were located and inspected. Interviews with the OMNR biologist and MFP staff revealed that there is a formal process to receive and record new values information, as well as to remove values that are determined to no longer exist (e.g. nests). We were informed that all values were verified in the field by OMNR staff before they were included on the map. The LCC had an opportunity to review the map and we determined that OMNR had done an effective job of responding to new information submitted by the public.

A review of prescriptions for operations, supported by field observations indicated that non-timber values were being protected and /or harmful affects mitigated as per the FMP strategies and objectives.

The Socio–Economic Impact Model (SEIM) helps the planning team to identify socio - economic impacts expected to be created by the quantity of timber that is supplied to the wood processing facilities and by the associated silvicultural investments. Resource based tourism also contributes socio–economic benefits to the Municipality of Sioux Lookout and the surrounding area. We determined through interviews and record analysis that MFP and the tourism industry have reached accommodations that enable each industry to function relatively effectively and with some certainty about its long term future. However, we were repeatedly informed that road based recreational users remain concerned about access restrictions to protect the tourism industry that restricts their use of the same resources. We were informed that there is a lack of detailed socio-economic information on the value and impact of road based recreation to the community. We were unable to locate any information on that segment of the population that uses the Forest for fishing, hunting, ATV and snowmobile travel, etc. We were also unable to obtain any independent verifiable economic information on the remote tourism industry. It would appear that this type of information should be available when access and road closures are being negotiated.

Recommendation # 5:

OMNR Sioux Lookout should enhance its socio-economic information base related to road based recreationalists and should encourage the Ministry of Tourism to provide the same for remote tourism operations on the Lac Seul Forest.

3.3.6. Objectives and Strategies / Management Alternatives

The FMP must establish direction for managing the forest to achieve forest sustainability which is defined as "long term forest health". Legislation and policy, resource management issues, the current state of the forest and the desired future forest condition all influence the strategic direction of the FMP. These factors are to be considered by the planning team and the LCC in the development of objectives for the management unit.

A management alternative is a combination of objectives and associated strategies required to achieve the objectives. A range of management alternatives are to be developed by the planning team with the assistance of the LCC. The management alternatives are compared to determine how they meet requirements for forest sustainability and they provide benefits from the forest (e.g. employment, wood fibre).

The objectives, targets and strategies in the 2006 FMP were organised according the four objective types required by the CFSA:

Objective Category 1 - Forest Diversity
This category had six objectives dealing with biological diversity; old growth; genetic diversity; harvest disturbance size, frequency and patterns; and balsam fir representation.

Objective Category 2 - Social and Economic Matters
Eight objectives were established relative to dealing with socio-economic considerations in the management of the Forest. These included consideration of Parks and Conservation Reserves; provision of a continuous and predictable wood supply; recognizing the diversity of social, economic, and cultural values; providing opportunities for local employment and related services; generation of Crown revenue; and provision of access to the Forest for other uses.

Objective Category 3 - Forest Cover
Five objectives related to forest cover were designed to supply wildlife habitat for indicator species with special focus on pine marten, caribou, moose and to minimize adverse effects on water quality and fish habitat.

Objective Category 4 – Silviculture
Two silviculture objectives were created to ensure adequate forest regeneration and maintenance of Crown forest available for timber production.

Each of the objectives had associated strategies and targets. The identification of objectives, targets and strategies was complete, comprehensive and presented in a well organised, easy to understand format.

Four management alternatives (including the three mandatory alternatives required by the FMPM) and two null alternatives were developed and analyzed:

1. Timber Volume production with limited silviculture funds (Mandatory Alternative).
2. Timber Volume production with unlimited silviculture funds (Mandatory Alternative).
3. Meet Anticipated Industrial Demand with unlimited silviculture funds (Mandatory Alternative).
4. Preferred Preliminary Management Alternative: Best Meets Plan Objectives.
5. Null Alternative: Forest Development Assuming No Fire Suppression Activities (Mandatory Alternative).
6. Null Alternative: Forest Development Assuming Current Level of Fire Suppression Activities.

The LCC was involved to some extent in the determination of the objectives, targets, and strategies as well as determining the Preliminary Preferred Management Alternative (See Section 3.2.1.).

The management alternatives were individually assessed to identify the future forest condition that could be expected, and their ability to ensure forest sustainability and desired benefits. The alternatives were compared at the non-spatial level, and the Preliminary Preferred Management Alternative was assessed spatially and non-spatially to test for sustainability.

We agree with planning team's conclusion that the Selected Management Alternative (Alternative 4) is sustainable. The SMA struck the best balance for meeting the sustainability indicators, achieving socio-economic objectives and achieving all the other objectives.
There were some technical aspects of the analysis of management alternatives which we felt could be improved. These include;

Land Base Depiction

In the analysis, some of the area calculations reported in the FMP tables and modeled in SFMM showed differences in either area reporting or area modeling. For example, FMP-1 depicted a total Crown Forest area of 763,054 ha, which was 4,531 ha less than the 767,585 ha modeled in SFMM.

Recommendation # 6:

MFP should ensure that all FMP tables and the SFMM model report available, reserved, and park areas consistently and accurately.

Calculation of Accumulating Reserves

More rigour is required in the calculation of accumulating reserves and snag provisions. The actual contribution of existing reserves (management reserves and protection forest) to existing disturbance residual requirements needs to be more accurately assessed and should include moose aquatic feeding areas and more realistic requirements for Natural Disturbance Pattern Emulation Guideline (NDPEG), especially for the hardwood and mixedwood forest units where the residual requirements are far higher.

Renewal Revenue

The renewal trust fund revenues used for modeling were much higher than the most recent actual renewal rates used for 2005 and 2006. Reasons given for this divergence included anticipated lower site preparation costs and renewal treatment costs, and a current account surplus. We feel that this wide divergence between modeled silvicultural funding and actual silvicultural funding needs to be continuously assessed through the life of the current FMP to ensure adequate funding for silviculture. MFP should strive to ensure that renewal costs modeled in SFMM are representative of the actual costs incurred.

Suggestion # 3:

MFP and OMNR need to ensure that renewal trust fund revenues remain sufficient to ensure that required silvicultural activities are undertaken to sustain the selected wood supply.

We did note that the yield curves used in the 2006 FMP were based on Penner's managed and unmanaged yields format, calibrated to Lac Seul Forest and refined based on nine years of recent Buchanan bush scale data and a complex digital assessment of the actual past yields for the harvest blocks. The use of actual scale pile data to calibrate yield curves used in modeling is a leading edge approach to this procedure.

Best Management Practice:

The use of scale pile data by MFP to calibrate the yield curves used in SFMM modeling.

3.3.7. Operational Planning

Operational planning selects areas for harvest, tending, and renewal operations for the five-year term of the forest management plan. Preferred silvicultural treatment packages and the silvicultural ground rules are identified and prescriptions to protect specific values are developed through AOC planning. Locations of new primary and secondary road corridors are determined.

Our record review and interviews with MFP and OMNR staff indicated that adequate information was available for planning AOC requirements for the 2006 FMP. Operational prescriptions were appropriate and included alternate methods of operation to support the protection of the value. Several exceptions to the specific direction outlined in implementation guidelines were proposed. These involved eagle nests, osprey nests, and harvesting within the Lac Seul Shoreline Reserve.

There were planned clearcut exceptions in that 31 of the proposed cuts were greater than 260 ha. There was also an exception to the Management Guidelines and Recommendations for Osprey in Ontario (1983) where aerial tending and planting was planned during the nesting season. Appropriate explanations and rationale were included in the Supplementary Documentation of the FMP.

Planned clearcuts less than 260 hectares totaled 73%, contrary to the Natural Disturbance Pattern Emulation Guideline (NDPEG) standard of 80% in the Boreal Forest Region. The FMP states "*This requirement directly conflicts with the direction to move the Forest toward the natural template because pre-fire suppression disturbances often exceeded 260 hectares...*" and the current forest "*...exceeds the pre-fire level for disturbances less than 260 hectares.*" The direction also conflicts with the marten and caribou habitat guidelines requiring much larger disturbances. We feel that the planning team used the best available information and found the appropriate balance to resolve the issue (i.e. 73% as opposed to 80%). Our assessment is that this was an appropriate approach to take with an acceptable result.

The Silvicultural Ground Rules (SGRs) were developed according to appropriate guidelines. The Silvicultural Treatment Packages (STPs)[5] were appropriate for forest types and included the silvicultural system, the harvest method, renewal, tending treatment and regeneration standards and targets. Forecasted renewal activities were consistent with those projected from SFMM, and supported the achievement of FMP objectives.

Areas selected for forest management activities were consistent with the selection criteria described in the FMP and the SFMM output file. The areas selected for operations were consistent with the eligibility requirements and the level of available harvest area for the Selected Management Alternative. Some differences within forest units between available and forecast harvest area by age class existed due to the manipulation of allocations to mitigate public concerns, to consolidate blocks to emulate the natural disturbance template for the site region and to consolidate harvest areas into operational blocks. The OMNR reviewed the allocations and determined that they were within the acceptable range of natural variation for the impacted forest units. The company planned

[5] Silvicultural Ground Rules (SGRs) specify the silvicultural systems and types of harvest, renewal and tending treatments that are available to manage forest cover and the type of forest that is expected to develop over time. A silvicultural treatment package (STP) is the path of silviculture treatments from the current forest condition to the future forest condition; STPs include the silvicultural system, harvest and logging method(s), renewal treatments, tending treatments, and regeneration standards.

to harvest all forecasted depletions so there was no surplus harvest area identified in the FMP.

The forecasted levels of harvest (both area and volume) and renewal were sufficient to provide for the achievement of the plan objectives. The 1996 FMPM requirement to provide a minimum of 3 months, and a maximum of one year of contingency harvest area was met by the identification of an area sufficient to support operations for one year.

Detailed road planning was incorporated in the FMP, and data were provided to support the need for forest access. Access controls were planned to protect tourism values and for areas required by the Lac Seul Lake Management Plan. Road planning was consistent with FMP objectives and met FMPM requirements. Detail was provided relative to road corridors, construction and maintenance schedules, locations and criteria for crossing through AOCs. All culvert size calculations were presented in the AWS and, as recently required in the new "Protocol for the Review of Water Crossings Proposed through the Forest Management Planning Process " the current year crossings and the proposed crossings for the following year, were presented in the 2005 - 2006 AWS. The public was provided with opportunities to review road plan(s) and provide comment although an issue emerged with respect to the public notification of access controls during the development of the 2006 FMP (Section 3.2.2.).

We conclude that operational planning requirements were fully in compliance with the FMPM.

3.3.8. Plan Review, Approval

The FMPM requires that the draft FMP be submitted for OMNR and public review, and alterations required by the OMNR must also be made available to the public. The draft and final plan must be certified by the Plan Author, and the final plan must be certified by the OMNR District Manager and approved by the OMNR Regional Director.

For the 2006 FMP, required alterations were supplied to the planning team. Four planning team members were also plan reviewers, which was useful in minimizing the number of required alterations.

A major public consultation issue arose between the draft plan review stage and plan approval stage regarding the incorporation of access controls into the FMP.
This issue is discussed in Section 3.2.2.

Timelines and milestones were consistent with the FMPM and all appropriate certification and approvals were made.

3.3.9. Plan Amendments

During the audit period, there were 50 amendments, to the 2001 FMP and 27 revisions to Annual Work Schedules. All of the amendments were administrative in nature and

did not reflect gaps in information or inadequate planning. All FMP amendment processes and procedures were followed and documented. Amendments were consistent with the 2001 FMP and certified by an RPF.

Appropriate public consultation processes, including LCC notification were followed and all amendment requests and approvals were recorded on a master list in the FMP amendment binder.

3.3.10. Contingency Plans

There were no contingency plans during the audit term.

3.3.11. Annual Work Schedules

The approved Annual Work Schedules for the 2001 FMP met FMPM requirements including the signatures required on the title and approval page. The AWSs were submitted on time and conformed to all public review requirements.

3.4. Plan Implementation

3.4.1. Areas of Concern

An Area of Concern is a defined geographic area, within an area selected for forest management activity which is adjacent to an identified value on the Values map. It represents an area where forest operations will be reviewed, controlled, modified, or excluded, as required to protect the value associated with the area.

We completed an examination of 17% of AOCs on the Forest. Appropriate prescriptions were in the 2001 FMP, AWS, and the FOPs.

We note that exceptions monitoring requirements were only minimally met by OMNR and MFP as outlined in the FMP. We did determine that OMNR completed some helicopter surveys and MFP staff did complete some informal monitoring when in the vicinity of specific values (e.g. nest). The poor monitoring performance was recognized by both parties. Despite the mediocre monitoring efforts our field observations did not reveal any issues. Because the problem was fully acknowledged, and we determined it is being addressed in the 2006 FMP implementation we do not feel a recommendation is required.

In the area adjacent to the Slate Falls First Nation smaller disturbances were planned due to remote tourism concerns and the desire of the First Nation to manage for moose as opposed to caribou. We were informed that the community did not support the Caribou guidelines. They are primarily moose hunters, and also felt that the emphasis on caribou did not support their plans to establish tourism operations that cater to moose hunters (i.e. non- aboriginal hunters cannot legally hunt caribou). We feel that the smaller sized disturbances were an appropriate action in this circumstance.

MFP staff were concerned about the number of wildlife guidelines. They felt that some of them lacked detailed socio-economic analysis and were based, in their view, on inadequate science. We viewed an internal MFP memorandum that had assessed guideline impacts given current modeling techniques. That document suggested that the cumulative effect of various wildlife guidelines had resulted in a 52% reduction in SPF volume, with the caribou mosaic alone accounting for 31% of that reduction. We discussed MFP's general assertion that significant volumes of wood were being lost to guideline implementation with OMNR staff and they disagreed with the company. However, they did agree with the company that socio-economic impact assessments were limited, and that the biological basis for some of the guidelines was still being reviewed and assessed.

The Company was also concerned about the rate of new guidelines being developed and their increasingly significant impacts. In portions of the Forest, the Moose Guidelines, that required fragmented harvest blocks, gave way to the Caribou Habitat Guidelines that attempt to emulate large-scale natural disturbance patterns through the creation of harvest and deferral blocks of 100 square kilometers or greater. Then the NDPEG, implemented in the 2006 FMP, directs that harvest patterns move towards historic patterns of disturbance typical of those prior to forest fire suppression activities. At times, one Guide may conflict with another (e.g. NDPEG and the Caribou Guide) and planning teams then have to determine which takes precedence. The Company frustration was partially based on a perception that OMNR did not understand, or was choosing to ignore the economic costs associated with these continuous changes.

We have heard similar concerns expressed in other IFAs; where company officials maintain the cumulative effects of guidelines are having serious negative economic impacts while OMNR officials remain unconvinced. There is no doubt that the issue is a concern to forest companies and local communities, particularly when many are facing serious economic uncertainty. We believe it would be beneficial for corporate OMNR and senior industry representatives to commission an independent assessment of guideline impacts on several representative Forests in northern Ontario. We understand that the biological basis for some of the guidelines is currently being reviewed and assessed, and we believe that inclusion of economic considerations would be helpful to senior OMNR decision makers, industry and community leaders.

Recommendation # 7:

Corporate OMNR and senior industry representatives should jointly commission an independent assessment of guideline impacts on several representative Forests in northern Ontario.

As we have encountered in other IFAs, there was a serious concern that NDPEG did not have a strong science-based foundation. We note the guide itself states:

"Most of the direction in this guide represents new and untested requirements."

and;

" If in the monitoring of the implementation of the guide it is determined that there are significant and unmanageable economic, ecological or social impacts, consideration will be given to a review and possible revision of the guide before the normal five-year review."

We understand from the OMNR that the NDPEG and its application are due for a five-year assessment and review. We believe it is critically important that the review involves field practitioners and managers (OMNR and industry) with first hand knowledge of both the biological and economic issues. In this regard we offer the following recommendation:

Recommendation # 8:

The OMNR review of the NDPEG should involve planning team members, field practitioners, and managers (forest industry and OMNR) with direct experience and knowledge of NDPEG implementation and associated issues.

3.4.2. Harvest

Forest management activities influence stand structure and function largely through the silvicultural treatments prescribed in the silvicultural ground rules and forest operation prescriptions. These treatment packages refer to the range of acceptable treatments (i.e., harvest, renewal, tending) for the appropriate forest unit which can be undertaken at various intervals throughout the life of a forest stand to achieve a desired future forest condition (OMNR 1996).

We found that the Silvicultural Ground Rules (SGRs)[6] were appropriate for ecosites found on the Lac Seul Forest and were documented as required. Twenty-seven Silvicultural Treatment Packages (STPs) were developed using OMNR manuals and the experience of MFP and OMNR staff. No treatments were identified as exceptions to the Silvicultural Ground Rules (SGRs). The management plan contained a listing and showed the silvicultural system for each stand.

We sampled approximately 13% of the actual harvest activities (Table 1). In addition, harvest activities were also viewed in conjunction with field investigations of other audit activities. All harvest sites were approved for operations in the AWS, and the prescriptions were in accordance with the SGRs. Our field investigations indicated that harvest prescriptions were appropriate for the site conditions.

[6] SGRs specify the silvicultural systems and types of harvest, renewal and tending treatments which may be used to manage the range of current forest unit - site type conditions on a forest.

The current Forest Resource License (FRL) holders on the Lac Seul Forest were the former traditional harvest operators on the old Sioux Lookout Crown Management Unit. These operators signed an agreement with McKenzie Forest Products Inc. in December of 1997 so they would be integrated into the overall harvest operations on the Forest. MFP has signed MOAs with 11 of the FRL holders. As shown in Table 3, actual harvest levels (area and volume) were below planned harvest levels for the audit period.

TABLE 3. PLANNED ANNUALIZED HARVEST VS. ACTUAL ANNUALIZED HARVEST (2001-2006)

Harvest	Planned	Actual	% Achievement
Harvest Volume (m^3)	895,422	676,678	76
Harvest Area (Ha)	7,429	5,452	73

Source: Comparison of Trends Analysis of Planned vs. Actual Forest Operations

The underachievement is attributed to operating constraints which resulted in more bypass, lower than anticipated volumes, mill closures, underutilization of some species due to poor markets and a large fire (Fire 48) which halted operations during 2003. The fire resulted in salvage operations between 2003 and 2006. Harvest volumes from the salvage operations were lower than in "normal" operations, since much of the burn area contained degraded balsam fir and hardwood stands with a spruce/fir understorey.

These factors reduced stand productivity and volume. The salvage operations also resulted in the actual harvest area exceeding planned area for some forest units (e.g. jack pine and red pine harvest exceeded planned levels while spruce harvesting was below planned levels). It is noteworthy that natural depletions exceeded harvest depletions on the Lac Seul Forest for the audit period.

Full utilization of planned levels of larch, poplar, and white birch has historically been a problem because of limited markets. During the audit period MFP shipped hardwood saw log material to the Buchanan Northern Hardwood mill in Thunder Bay, and chipped and sold lower quality hardwood to the pulp and paper sector. Actual harvest levels of underutilized species are expected to continue to approach planned levels in future planning terms. However, recent mill closures in northwestern Ontario may cause temporary setbacks in the full utilization of planned volumes because some of those mills used chips from operations on the Lac Seul Forest.

The 2006-2011 FMP shows planned harvest levels declining and moving toward actual harvest volumes achieved in the 2001-2006 term. In past plans harvest rates were accelerated to capture merchantable volume in over mature stands before they became non-operational. The continuation of this accelerated harvest strategy would have exacerbated anticipated wood supply problems arising from the skewed age class distribution of the Forest. We agree that the manager's strategy of reducing allowable harvest levels for future plan terms to achieve more harvest stability over time is appropriate.

During the audit period the clearcut silvicultural system was the sole harvesting system applied on the Forest. Two logging methods employed were the conventional method and the corridor selection method (CSM)[7]. The conventional logging method entails the removal of a stand (or a number of adjacent stands) from a large contiguous area in one operation, while the CSM method is applied on wetland or organic soil types. The CSM restricts logging equipment to trails that are spaced to prevent compaction of the sphagnum moss and retain it as a receptive seedbed. The CSM also protects advanced growth and is a "best management" strategy when operating on shallow soils. Where shallow soils limit operations, merchantable trees are left standing to maintain nutrient capital on the site, and achieve snag management and tree retention objectives.

During the audit period both full tree (i.e. moving the whole tree to the roadside where limbing and topping occurs) and tree length (i.e. the removal of only the merchantable length of the tree to the roadside; limbing and topping occurs at the stump) logging methods were used. Full tree harvesting was the most commonly applied logging system. Operations of the overlapping licensees were typically tree length delivered by utilizing a cut and skid system, mechanized processing system or a combination of the two. We determined that logging methods being utilized were in accordance with the SGRs and STPs.

MFP and the traditional operators utilized chipping operations or the first time during the audit period to facilitate the harvest of low quality/low volume stands resulting from spruce budworm infestations. A conscious effort was made to allocate these low volume stands in the 2006 FMP to address both the potential fire hazard and the possibility of future forest species compositional changes associated with the budworm damaged areas.

Full tree logging systems result in the majority of slash being situated at the roadside. The companies' treatment of slash is discussed in Section 3.4.3.

During the site inspections we noted improvement in the required retention of snag trees in that areas harvested later in the audit period retained more trees than those harvested earlier. Snag trees retained in the later period were also more representative of the pre-harvest forest (e.g. diameter class distributions and species composition). MFP typically stubbed conifer leave trees in order to prevent the blow down of the standing snag and to recover some of the merchantable volume of the leave trees. We felt this was an appropriate practice.

Wood utilization on inspected harvest areas was very good and sites were clear of litter associated with normal operations.

In June 2003, a major fire (Fire 48) (approximately 29,000 ha) necessitated the salvage of

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[7] The CSM method is an operational harvesting practice the Company has been applying on the Lac Seul Forest since 1995 where the wetland, organic soil, site types are encountered. The principles of CSM are the same as those of the Careful Logging and the Careful Logging Around Advanced Growth (CLAAG) methods.

6,116 ha. [8] We determined the FMP amendment process was appropriately implemented. The salvage operation required the Company to redirect harvesting and road building operations from normal planned harvest areas for 2003 and 2004. Salvage operations continued through 2005 and 2006 and are planned to continue in the 2006-2011 FMP planning term. Additionally, high winds in 2005 caused significant blow down in some areas and salvage operations commenced in the summer of 2006.

The 2001-06 FMP included objectives and strategies to maintain or increase the red pine forest unit. The sustainable red pine allocation (i.e.1,448 m^3) was allocated to two local commercial log home builders. The 1997 IFA of the Sioux Lookout Forest found that the red pine allocation was not being fully utilized and recommended that the licence be withdrawn from one licensee who had not completed any harvesting over the audit period. OMNR, on advice from the LCC and MFP rejected the recommendation and renewed the license for a five-year term (i.e. expiring in 2006), conditional upon harvest performance guarantees. At the time of the field audit (approximately a decade later) the individual had not harvested any pine. The 2001 audit recommendation provided an opportunity to resolve part of the issue and make the resource available for others who can utilize it. We did not receive a compelling reason from OMNR to explain why the recommendation was rejected. Nevertheless, the licence was renewed and we make the following recommendation.

Recommendation # 9:

The OMNR District Manager should remove the operators licence if the full red pine allocation is not harvested by the end of the licence term.

Discussions with OMNR and MFP staff indicated that while the red pine allocation is very small, it remained an ongoing issue that consumed a disproportionate amount of time and resources. We question if the allocation of this small, but valuable resource should continue to be licenced in the way that it is. One of the operators has not completed any harvesting in over a decade. The other individual has only made limited use of his allocation (56%) and our discussions with him indicated to us that his primary objective is to sell the licence rather than harvest the wood. OMNR has a responsibility to ensure this public resource is effectively used. The OMNR and MFP should review the options available to ensure that the available red pine is harvested. There is a clear and long history that indicates the existing licensing arrangement does not work. From our perspective, some form of approval to harvest under the SFL should be made available to those who can demonstrate they have a use (construction of a private home) or a market (commercial construction) for the logs. The existing log home builders would still be able to access the wood if they demonstrate they have a customer.

[8] The total area burned included a significant area of unproductive land and areas that had already been harvested prior to the fire which could not be salvaged.

Recommendation # 10:

OMNR District and MFP should conduct a review to determine the most effective method of making the limited red pine allocation available to the public and to the commercial log building industry.

In our field audit we found no instances of harvest non-compliance (other than snag deficiencies). During the audit period industry conducted 290 harvest inspections and OMNR conducted 96 inspections. There were 32 "Not In Compliance" (NIC) reports related to harvest activities ranging from garbage on the site, to wastage and trespass. No discernable trends were present relative to incident type or timing. In 2002-2003 there were two Not In Compliance (NIC) reports relative to snag guidelines and none after that time. We conclude that compliance was not an issue with respect to harvesting activities.

We note that localized rutting occurred on some harvest blocks primarily as a result of previous mild winters where minimal frost was in the ground. Our inspection of these areas indicated that regeneration efforts will not be compromised, and the appearance and effects of the ruts will diminish over time. At the same time, we determined that MFP identifies both lowland organic and wet clay site types that are sensitive to rutting on their annual operational maps provided to their operators. MFP provides basic direction to operators harvest only during the winter or with high floatation tires during frost free periods. There is an expectation that operators will exercise due diligence to minimize rutting. A suggestion is provided.

Suggestion # 4:

MFP should create a section specifically for "sensitive sites" within their EMS program to provide direction on how to minimize rutting and what actions to take when rutting occurs.

3.4.3. Renewal

The audit sampled approximately 19% of the artificial and natural renewal activities conducted on the Forest during the audit period. All activities observed in the field were approved in the FMP and complied with the applicable silviculture ground rules (SGRs).

Renewal activities were consistent with the Forest Operation Prescriptions (FOPs) and were appropriate to the specific site conditions.

As shown in Table 4, the total area renewed exceeds the area harvested but accounts for only 67% of the total area depleted. During the audit period two significant natural depletion events occurred on the Forest (i.e. Fire 48 and a major wind event). In 2003, Fire 48 depleted 28,540 ha. In 2005 a major wind event damaged 6,904 ha of timber. During 2004 – 2005 MFP seeded 23,655 ha of the burn with funding assistance from

the Forest Futures Trust Account[9]. The wind event occurred late in the audit period (i.e. 2005) and salvaged areas had yet to be treated for renewal at the time of the field audit.

Most of the productive ground in the burn was aerial seeded with a jack pine/ black spruce mix to augment natural renewal and reduce the proportion of balsam fir on the burn site[10]. Our site inspections in the burn indicated that the seeding program was largely successful and the burned area is renewing to mainly spruce and jack pine forest (Photograph 1). Some planting of red pine was also undertaken in riparian zones damaged by the fire

A large portion of the burn was not site prepared prior to the seeding treatment because much of the fire area had low remaining duff levels due to the high intensity of the burn. In the absence of site preparation some seeded areas on more competitive areas of the burn are expected to renew to poplar and birch. MFP plans to conduct assessments between 2006 -11 to determine if tending treatments are required to release the conifer regeneration.

TABLE 4. HARVEST AND RENEWAL AREA 2001-2006 (AREA IN HECTARES (HA)

Planning Term Period	Harvest (Ha)	Natural Depletions (Ha) (Fire & Windthrow)	Total Depletions (Ha)	Total Renewal (Ha)	Difference (Ha)	Percentage (%)
2001 - 2006	27,260	35,444	62,704	41,585	21,1119*	67%

*Includes 2005 windthrow event where salvaged areas have not been treated for renewal.

Natural renewal treatments achieved approximately 50% of the planned targets, reflecting lower than planned harvest levels due to poor market conditions, the cessation of operations during Fire 48 and salvage harvest requirements, and mild winters which resulted in lower levels of harvesting on spruce lowland sites (Table 5). Artificial renewal targets significantly overachieved planned targets (192%) due to the unplanned seeding program on the area burned over by Fire 48 (Table 5).

[9] The Forest Futures Trust Account provides renewal assistance funding for natural disasters such as fire, windthrow and insect infestations.

[10] Measures to occupy all available germination sites with seed from desirable species sites reduce the area available for the germination of less desirable species such as balsam.

Photograph 1. Successful renewal in Fire 48 burn.

TABLE 5. PLANNED VS. ACTUAL NATURAL AND ARTIFICIAL RENEWAL (AREA IN HA)

Period	Natural Renewal		Artificial Renewal	
	Planned	**Actual**	**Planned**	**Actual**
2001 - 2006	6,197	3,093	20,022	14,832
Fire 48 (*seeding)*				23,650
Total:	6,197	3,093	20,022	38,482

For the five-year audit term MFP conducted regeneration assessments on 17,793 ha and determined that 17,786 ha had successfully regenerated (99%). Our field inspections also confirmed the success of the renewal program. Inspected sites typically exhibited high stocking densities arising from high survival rates of planted stock, excellent germination on sites that had received seeding treatments and natural ingress. MFP estimates that future stand densities will be in the range of 5,000 to 6,000 stems per hectare and does not anticipate a future requirement for extensive thinning applications. To control future stand densities MFP has reduced seeding rates downwards (from 50,000 to 40,000 seeds per hectare) to account for natural ingress on some ecotypes, and has implemented strict spacing requirements on planted sites to avoid planting close to natural ingress.

Table 6 shows that overall, the site preparation program achieved 51% of planned targets during the audit period.

TABLE 6. PLANNED VS. ACTUAL SITE PREPARATION (AREA IN HECTARES)

Period	Site Preparation Activity		
	Activity Type	Planned (Ha)	Actual (Ha)
2001 - 2006	Mechanical	17,847	9,433
	Chemical	1,000	122

Mechanical site preparation achieved 52% of planned targets. This achievement level is reflective of efforts by MFP to move towards area-base planting without site preparation on thin duff sites. Passive trenching was the primary technique utilized as the equipment adequately exposed mineral soils, and on many sites successfully reduced competing vegetation. There was no observed environmental site damage arising from mechanical site preparation on inspected areas.

Chemical site preparation requirements were significantly lower than planned (122 ha treated vs. planned 1,000 ha (12%)). Our site inspections indicated that most sites did not require treatment prior to renewal and that aerial spray treatments following renewal were sufficient to reduce competing vegetation.

MFP implemented a slash pile burning program during the audit period that had mixed results. Poor results on some sites were attributed to poor weather, pile conditions (compacted piles or non-flammable material in piles) or timing and accessibility constraints. During the audit we were informed that MFP intended to discontinue slash piling and burn programs as a result of an internal company review into the cost effectiveness of these programs. The company indicated that it intended to investigate more cost effective approaches. MFP has committed to implementing a burn program for outstanding piles (to be completed in 2007) and will be initiating alternative methods for creating plantable spots within roadside debris during 2007.

In addition to cost considerations, we encourage MFP to evaluate the efficiency and effectiveness of its slash management program on forest sustainability. The loss of productive land to slash and logging debris is an important silvicultural consideration on this Forest where the available harvest area is already subject to significant reductions due to tourism, the application of various guidelines, and future projections of declining wood supply.

It is our assessment that a very successful renewal program is being implemented on the Forest (Photograph 2).

Photograph 2. Successful renewal within a jack pine cutover.

3.4.4. Tending and Protection

During the audit we sampled approximately 17% of the tending activities conducted on the Forest during the audit period. All activities observed in the field were approved in the FMP and complied with the applicable Silviculture Ground Rules (SGRs). Tending activities were consistent with the Forest Operation Prescriptions (FOPs).

The tending program was effectively delivered mainly through the aerial application of herbicides. As noted in Table 7, the Company accomplished 150% of their planned tending targets. The significant overachievement was reflective of a transition from harvest and renewal operations on less competitive, coarse textured soil sites to operations on finer soil types which are more competitive, requiring tending treatment(s) in order to establish and release conifer. [11]

[11] Soils in the north are finer textured than soils in the southern portions of the Forest.

TABLE 7. ACTUAL VS. PLANNED TENDING

Period	Tending		
	Activity	Planned (Ha)	Actual (Ha)
2001 - 2006	Manual	200	Nil
	Chemical Ground	200	Nil
	Chemical Aerial	7000	10,582
	Pre-Commercial Thinning	300	Nil

Our field site inspections determined that tending treatments were required, well-timed and effective (Photograph 3). MFP has encountered some problems controlling alder competition on lowland black spruce sites and research trails are being conducted to investigate the effectiveness of different treatments to address the issue.

Photograph 3. Effective aerial tending within a jack pine renewal site.

No compliance issues related to the tending program were reported during the audit period.

Pre-commercial thinning under achieved planned targets. This circumstance was attributed to the fact that Fire 48 destroyed many of the plantations which had been scheduled for treatment. The lack of available contractors and the on-set of early snow in 2005-2006 also precluded the completion of several planned thinning projects.

It is our assessment that MFP implemented an effective tending program during the audit period.

3.4.5. Renewal Support

Renewal support activities on the LSF included tree seed collection, planting stock production and tree improvement operations. For the audit period the Company purchased approximately 16 million seedlings and utilized about 943 million seeds for their aerial seeding and container stock production programs as noted in Table 8.

TABLE 8. RENEWAL SUPPORT ACTIVITIES ON THE LAC SEUL FOREST (2001-2006)

Year	Trees Purchased	Seed Used (000's)	Cones Purchased (Bulk seed Hectoliters)	Orchard Seed (Hectoliters)
2001 - 2002	3,484,400	46,170	300.5	11.0
2002 - 2003	2,809,785	40,447	407.7	26.4
2003 - 2004	3,280,840	722,620	226.8	11.1
2004 - 2005	4,789,096	76,788	946.5	Nil
2005 - 2006	1,778,357	57,562	374.6	31.4
Total:	16,142,536	943,587	2,256.1	79.9

The Company is a member of the Superior – Woods Tree Improvement Association and a partner in three Seed Orchards:

- Goodie Lake Black Spruce South Orchard – Seed Zone 08.
- Goodie Lake Black Spruce North Orchard – Seed Zone 09.
- Vermilion River Jack Pine Orchard – Seed Zone 09.

MFP and the their tree improvement partners have been doing a variety of work in the orchards such as, rogueing, topping and conducting a stress density study on jack pine.

Sufficient seed was collected to support seeding and planting programs, and sufficient tree seedlings were purchased to support their planned planting program. The Company had sufficient funding in their Silviculture Trust Account to support their full silviculture program.

3.4.6. Access

Road construction, various types of water crossings, road maintenance and any other access activities must be conducted in accordance with the FMP, AWS and current applicable laws and regulations.

We traveled hundreds of kilometers of roads and examined 26 culverts and bridges. The Company had a current road inventory. Roads had been constructed with minimal environmental damage and there was a maintenance program in place. The Company utilized graders with carbide teeth on the blade to remove larger stones from the roadbed which led to much improved roads over the long term. Both active and in-active roads were generally in good condition.

OMNR staff expressed concern about the lack of a monitoring program on the roads that are not being used by the company for extended periods of time. The primary concern was the potential for road erosion and/or culvert blockages to go undetected for a period of time, resulting in siltation into streams. The OMNR was also concerned about potential safety issues that could be created. In one instance OMNR issued an order to MFP to repair culverts on an unused road. MFP's basic position was that they would only provide maintenance on roads that were being used, or planned to be used in the near future for company operations. The OMNR informed us that once the major amendment to the 2006 FMP was completed relative to access issues (discussed in Section 3.2.2) the OMNR and the Company would complete a new roads inventory and determine maintenance responsibilities prior to the commencement of planning for the 2011 FMP. At that time appropriate monitoring and repair programs would be negotiated and developed to prevent potential environmental and safety problems. During the field audit we did not encounter any situations that would lead us to provide a recommendation. However, we encourage the OMNR and MFP to work towards an agreement on this issue.

OMNR has made annual funding available to the forest industry for maintenance on roads identified in the FMP as primary access roads, and that also met FMPM requirements and public access criteria. On January 27th 2006 MFP entered into a Road Maintenance Agreement with OMNR. OMNR approved 18 roads (469 Km) identified by MFP for road maintenance in 2005 – 2006. Table 9 describes the work completed on 6 roads (255 km) for which MFP invoiced OMNR. During the audit we traveled these roads or observed them from the air and verified work was undertaken to maintain them.

TABLE 9. ROADS MAINTENANCE AGREEMENT WORK 2005-2006

Road	Work Description	Km Maintained
Vermilion River	Culvert replacement Gravel/ Grading Sanding, snowplowing and cleaning	172.4
Linden	Culvert replacement Gravel/ Grading Sanding, snowplowing and cleaning	24.8
Harrison	Culvert replacement Gravel/ Grading Sanding, snowplowing and cleaning	6.0
Rawhide	Culvert replacement Gravel/ Grading Sanding, snowplowing and cleaning	15.1
Slate Falls	Culvert replacement Gravel/ Grading Sanding, snowplowing and cleaning	12.0
Moose Lake	Culvert replacement Gravel/ Grading Sanding, snowplowing and cleaning	24.4
Total:		**254.7**

All the culverts and bridges we examined were compliant with the Environmental Guidelines for Access Roads and Water Crossings (Photograph 4 and 5).

Photograph 4. An example of a well installed culvert

Photograph 5. Properly constructed water crossing

There were a number of access restrictions to protect tourism values. Access was restricted by methods such as ditching, removal of culverts and bridges, or the placement of physical barriers (i.e. large boulders). In our view, the removal of culverts and bridges was well done. Banks were sloped and stabilized and potential erosion problems were mitigated by ditches, silt traps, and seeding.

Forest access inspections comprised 20% (95 FOIRs) of all of MFP inspections and 30% (50 FOIRs) of all OMNR's inspections during the audit period.

Of the 145 inspections, 12 (8%) were recorded as Not In Compliance. All of these except one (i.e. pail left by road) were relative to sedimentation from poor culvert maintenance, road washouts, and/or bank erosion at existing water crossings. All incidents were considered minor and were addressed in a timely manner.

3.5. Systems Support

3.5.1. Human Resources

We examined MFP organizational charts. There was a very detailed listing of positions and responsibilities under a number of categories (e.g. Quality and Inventory Control, Logging Operations, Overlapping Licensees', Safety, Compliance, etc). Duties and reporting relationships were color coded for ease of understanding and described in detail. Based on our experience on a number of IFAs, this was the most comprehensive and clear identification of duties and responsibilities we have encountered. When requesting audit materials and/or background on issues and decisions it was simple to determine who to contact. Those individuals clearly knew their role in the Company and were able to quickly and accurately respond to our requests. We felt it was a very effective system.

The Company and OMNR had utilized a full range of training methods and materials to ensure employees were fully aware of their responsibilities and capable of carrying them out. Formal courses, presentations and a full range of communication methods (email, bulletins, and tailgate meetings) were used to ensure staff was aware of the intent, content, and implementation requirements of legislation, manuals and guidelines.

We were provided with a well-organized and complete listing of all the training courses available to MFP employees as well as a detailed listing of training completed by each individual. We also reviewed a Safety Calendar Summary dating back to 1995 that documented all safety meetings, training, inspections, and correspondence. It was the most comprehensive documentation we have encountered, representing a priority corporate commitment to staff safety. We also determined that OMNR training records were complete and current.

MFP and OMNR staff indicated that training opportunities were accessible to them, and as job requirements changed appropriate training was provided. For both organizations

we determined that planned and completed training was relevant to the positions and duties of the individual. Examples include:

- OMNR and company foresters had completed various wildlife guideline and ecological land classification training.
- OMNR and Company operations staff had completed culvert installation, sediment control, and NDPEG training.

Training opportunities, presentations and handout materials were also offered to the LCC members with respect to FMP production, guidelines, NDPEG, etc. Some members took advantage of the formal training opportunities. As well, OMNR and MFP provided training to overlapping FRL holders. A sample of the types of courses included:

- Water crossing course (MFP).
- Environmental management courses (MFP).
- Transportation of dangerous goods (MFP).
- First aid (MFP).
- Chainsaw use (MFP).
- FOCIS (OMNR).
- FOIP (OMNR).

The OMNR had completed all required reporting of communications, training and initiatives with First Nations to increase their involvement in forest management (Section 3.2.3.).

Our assessment is that both the OMNR and MFP met all IFAPP criteria related to communicating corporate directions and providing appropriate training.

3.5.2. Documentation and Quality Control

The Company had an effective record management system. All forest management reports were stored in a dedicated area, were readily available for review, and were updated as required. It effectively utilized a Geographical Information System (GIS) as a decision support tool for forest management planning, record and document control, and other database functions. The GIS system provided a tracking system for silviculture and assessment activities.

Documents and records at the OMNR Sioux Lookout District were complete and current. The District provided us with all required material in a timely and efficient manner.

3.6. Monitoring

3.6.1. General Monitoring

MFP and OMNR demonstrated a strong commitment to achieving forest compliance.

MFP produced a Five Year Compliance Strategy for both the 2006 and 2001 FMPs. The strategies met all requirements outlined in the Guidelines for Forest Industry Compliance Planning and were approved by the OMNR District Manager. Annual Schedules, consistent with the guidelines, were produced as part of the AWSs. Annual Compliance Operation Plans (ACOPs) were produced by the OMNR District throughout the audit period.

MFP was responsible for compliance planning and overall compliance on the Forest; however, all FRLs were responsible for ensuring compliance on their own operations, including completing Forest Operation Inspection Reports (FOIRs). In some cases the FRLs had their own certified inspectors and in other cases they employed certified contractors to do the inspections. The FRLs were responsible for their own non-compliant actions, making corrections and paying penalties.

A review of the compliance history on the Forest (Table 10 and Table 11) indicated a stable level of non-compliance over the audit period, with the OMNR reporting a higher percentage of non-compliance than MFP. MFP and OMNR both had certified compliance specialists and inspectors on staff. The two organizations held regular meetings and periodic joint inspections to reduce differences in perspectives and decisions with respect to forest activities; however, there were still discrepancies between what OMNR inspectors and industry inspectors viewed as non-compliance, and we provide a suggestion in this regard.

Suggestion # 5:

OMNR and MFP senior compliance staff should monitor results from FOIRs and continue efforts to reduce the gap between the two organizations in their respective assessments of non-compliance.

TABLE 10: INDUSTRY COMPLIANCE INSPECTIONS, LAC SEUL FOREST, 2001-2006
(Number of "Not In Compliance Reports" in Brackets)

Activity	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Access	14	9	12 (1)	13	47 (2)
Harvest	44 (1)	53 (1)	36 (3)	42 (1)	115 (3)
Renewal	21	18	19	22	4
Maintenance	1	0	0	1	1
Protection	0	0	0	*	*
Total:	80 (1)	80 (1)	67 (4)	79 (1))	167 (5)
% NIC:	1	1	6	1	3

Source – 2001-2004 are from FOCIS and 2004-2006 are from FOIP

TABLE 11. OMNR COMPLIANCE INSPECTIONS, LAC SEUL FOREST, 2001-2006
(Number of "Not In Compliance Reports" in Brackets)

Activity	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
Access	4	8 (1)	20 (7)	8 (1)	10
Harvest	18 (2)	22 (8)	14 (2)	15 (1)	27 (10)
Renewal	6	2	0	3	3 (1)
Maintenance	1	2	1	1	0
Protection	0	0	0		
Total:	29 (2)	34 (9)	35 (9)	27 (2)	40 (11)
% NIC:	7	26	26	7	28

Source – 2001-2004 are from FOCIS and 2004-2006 are from FOIP

There were no discernible systemic issues or trends in the types of non-compliance. Some of the instances were related to poor communication, others to inattention, such as maintenance on unused roads. Most of the instances of non-compliance were minor in nature and quickly rectified by MFP contractors and FRL holders. The OMNR, for example, had taken a "hard" stand on garbage on the Forest so that a 5 gallon pail left on a landing could generate a non-compliance report. In 2005-2006, four of the harvest violations were for fire extinguishers that had not been checked and updated. Offences included minor harvest trespasses into AOCs and unallocated stands. On the trespass sites we investigated the function of the AOC was not compromised. We did not observe any unrecorded instances of non-compliance in our field examination.

MFP established inspection targets based on planned levels of operational activity and generally achieved planned targets. It is our assessment, that the level of inspection

activity was appropriate to the Forest and its compliance history. The District ACOPs established an annual target of 48 inspections. Table 11 shows the number of actual inspections ranging between 27 and 40. Other workloads and available staffing were cited by the OMNR as hindering full achievement of the planned target. Even though the planned target of 48 inspections was not fully met, the OMNR did carry out 35 inspections for every 100 inspections done by the industry. It is our assessment that this is an adequate rate of OMNR inspection.

Harvesting was the dominant activity relative to the need for compliance inspections. Many of the harvest foremen were certified compliance inspectors and therefore were also responsible for compliance reporting on operations they supervised. Where foremen were not certified inspectors, they prepared an internal report and sent it to the Compliance Auditor who reviewed it, inspected the block and prepared a FOIR.

The evidence suggests that OMNR, MFP and the FRL holders all strived to meet FOIR reporting deadlines. Generally deadlines were met with regard to NIC reports; however, there were some time lags for In Compliance and In Compliance With Comments reports by all involved. We determined the timing of reporting had improved through the audit period.

Silviculture Effectiveness Monitoring

The 2001 and 2006 FMP contained a description of silvicultural and exceptions monitoring programs. These monitoring programs included monitoring the effectiveness of silvicultural treatments and prescriptions for areas of concern which were exceptions to the implementation manuals (e.g. harvests in tertiary zones around eagle and osprey nests).

Staff completed sufficient regeneration and free-to-grow assessments to ensure regeneration on the Forest. Our field audit, employee interviews, and review of records confirmed that action was taken to assess silviculture effectiveness and respond accordingly.

Regeneration assessments were conducted on 18,215 ha during the 2001-05 FMP term. The level of regeneration assessments (18,215 ha) exceeded planned levels (16,375 ha). The company reports that 17,822 hectares or 98% of the area surveyed was found to be successfully regenerated.

3.6.2. Annual Report

For each Forest a report must be prepared annually to summarize the forest management activities that were carried out during the preceding year. Standards for reporting are set out in the FMPM, the FIM and the Annual Report Preparation and Review Protocol. Reports were required in the spring and fall until 2003-2004. From 2004-2005 on only one report is required on November 15th (i.e. the report for the operational year April 1st, 2004 to March 31st, 2005 is due on November 15th, 2005).

The 2001- 2002, 2002-2003 and 2003 -2004 Annual Reports were submitted on time. ARs generally met FMPM requirements. An exception was that MFP compliance reporting lacked sufficient detail with respect to analysis of non compliance, corrective actions taken and assessment of trends. The 2004-2005 report was late (not completed until February 24th, 2006) as a result of workloads associated with the development of the 2006 FMP. We consider this three month delay to be reasonable. The 2005-2006 final year report of the 2001 FMP did not have to be submitted until November 15 2006 (after this audit).

We have not provided a recommendation to address the minor deficiencies associated with the content of ARs prepared early in the audit period because improvements in reporting standards were evident in the 2004-2005 AR.

3.6.3. Report of Past Forest Operations

Two RPFO documents were available for review during the audit; 1996-2001 RPFO and a draft 2006 Report of Past Forest Operations (RPFO). The draft 2006 RPFO was prepared as a supplementary interim document for OMNR review, prior to the Invitation to Participate (2006-2011 FMP) and the submission of the 10 Year Annual Report (due November 15, 2006). The text and tables of the 2006 RPFO covered the previous planning term for each unit (i.e. 1996-2001 for the Lac Seul Forest and 1997-2001 for the Sioux Lookout Forest). The 2006 RPFO examined the planned and actual forest management activities that occurred on the Lac Seul and Sioux Lookout Forests. The report did not document activities on the Abitibi Unit as no forest management activities were scheduled between 1998 and 2001, and earlier management activities were reported in the 2001 RPFO. The 2006 RPFO was submitted as one document with separate tables, maps and stand lists for the Sioux Lookout and Lac Seul Forest. The 2001 RPFO was also submitted as one document with separate tables, maps and stand lists for each unit (i.e. Sioux Lookout Crown Management Unit 1991-1996, Abitibi Sioux Lookout Management Unit 1993-1998, and the Lac Seul Forest 1992-1997).

In accordance with OMNR direction, both RPFOs provided separate tables, maps, and stand lists for each management unit because the original land base, forest units, and the management objectives and strategies were different for each Forest. The effectiveness of Selected Management Alternatives and forest sustainability was assessed in each report.

For both reports reviewed, in instances where information was available the required tables were accurate and complete. The assessment of forest sustainability was cursory as most of the required tables and sections related to forest sustainability could not be fully completed, either because information was not available or information was not available in a suitable format in earlier plan documents. For example, the summary report of landscape pattern or forest diversity indices could not be completed for either Forest as the information required to build the table was not a requirement in the earlier FMPs. As subsequent plans are prepared data will be available to facilitate a more comprehensive comparison of data and the determination of trends.

A comprehensive evaluation of operations and an assessment of the achievement of management objectives were included for each Forest. It is our opinion that the explanations for identified shortfalls in the achievement of planning targets were reasonable.

As required by the FMPM, the RPFOs contained a section which provided conclusions and recommendations to assist in the development of the 2006-2011 FMP. We determined that 2001 RPFO information was utilized in the development and/or implementation of the 2006 FMP.

Information reported in the RPFOs was consistent with information reported in the Comparison and Trends Analysis of Planned vs. Actual Forest Operations Report. We conclude that RPFOs met FMPM requirements.

3.7. Achievement of Management Objectives and Forest Sustainability

Achievement of Management Objectives

Table 12 provides a summary of the achievement of 2001 FMP objectives based on the findings of this audit and our review of the 2006 RPFO assessment of achievement of management objectives. Our comments with respect to the accomplishment of the objectives are included in the table.

TABLE 12. SUMMARY OF THE STATUS OF THE 2001 LAC SEUL FMP OBJECTIVES

Objectives	Achieved (Yes/No/ Partial)	Auditor Comments and Notes
Forest Diversity		
"To ensure that current biological diversity of the forest is not significantly changed except where it is necessary and practical to restore natural disturbance and landscape patterns (i.e. maintain within the bounds of natural variation)."	Yes	There has been no significant change in forest species representation or in wildlife habitat quantity. Forecasted depletions for the 2001 FMP showed considerable movement towards a template for a pre-fire suppression forest. In the Selected Management Alternative, the forest unit composition was within 20% of the natural fire origin alternative (based on 100 years) or was making progress toward +/- 20% of this alternative for all forest

		units. All of the management alternatives maintained the presence of stands of Pr/Pw forest unit older than 110 years of age on the land base.
"To ensure that red and white pine forest ecosystems, including old growth stands, are present on the landscape of the forest now and into the future, while permitting a sustainable harvest of red and white pine."	Partial	The SMA increased the amount of Pr/Pw forest unit area on the land base and maintained the presence of stands older than 110 years (although there was a reduction of "old" area due to fire depletions). MFP has renewed harvest areas of red pine forest unit back to red pine. Where appropriate, MFP has also planted small amounts of red pine in other harvested areas, and in the salvage logged areas of Fire 48. There have been longstanding issues associated with red pine harvesting (Section 3.4.2.).
Social and Economic Matters		
"To be able to supply in a cost effective manner, a continuous and predictable supply of suitable sawlog material to the Hudson sawmill, and to provide other products (i.e. residual by-products such as chips, sawdust and pulpwood, and high value poles and cabin logs) while maintaining forest sustainability and a stable work force."	Partial	The current age class structure imbalance on the Lac Seul Forest will result in lower harvest levels and sawlog recovery in future planning terms. MFP has developed fibre exchange agreements with regional Pulp and Paper mills to exchange pulpwood material for sawlogs. The fibre exchange agreements have only been minimally successful due to poor markets.

		MFP has tried to increase their harvest in hardwood mixedwood sites to enable the exchange of hardwood chips for sawlogs. MFP installed a small dimension line in their Hudson sawmill which has improved their ability to use smaller wood. Actual harvest levels were below planned, due to operating constraints which resulted from more bypass and lower than anticipated volumes being harvested, mill closures, underutilization of some species, and Fire 48. If current poor market conditions for chronically underutilized species continue to exist, supply of sawlogs and related material will be significantly reduced over the longer term.
"To work with local First Nations communities to identify and implement ways for First Nations communities to realize increased benefit from the forest."	Yes	The Company has negotiated successful forestry and access agreements with the Lac Seul and Slate Falls First Nations.
"To provide for a range of quality tourism opportunities while maintaining forest sustainability."	Yes	The FMP provided for the protection of remote tourism values. MFP had a formal process to pursue agreements with the individual tourism operators to address area specific issues.
"To provide for harvest opportunities of forest-based food, fur, and other renewable goods, while maintaining overall forest sustainability	Yes	The planned and actual harvest emulated natural forest disturbance, and the proper application of guidelines protected fish and wildlife resources.

through the emulation of natural disturbances."		Forest access has provided resource harvesting opportunities to the general public.
"To develop the recreation potential of the forest consistent with forest sustainability."	Yes	Forest access has provided recreational opportunities for the general public.
"To protect non-renewable cultural heritage resources on the forest."	Yes	AOCs were implemented to protect identified values. Native background and values information were incorporated into the FMP.
"To encourage optimum levels and diversity of employment derived from the forest while being consistent with all other strategic objectives."	Yes	The Selected Management Alternative provided for an optimum level of employment opportunities. Agreements were signed to facilitate wood exchange. Agreements were negotiated with the tourism industry. First Nation communities were involved in harvest activities.
The Provision of Forest Cover		
"To supply current and future suitable habitat for featured wildlife species over time, within the bounds of natural forest diversity."	Yes	The SMA and application of guidelines provided current and future habitat within the bounds of natural forest diversity.
"To maintain water quality and protect fisheries habitat within watersheds where forest management activities occur."	Yes	The application of guidelines and the use of AOCs maintained water quality and provided protection for fisheries habitat.
"To manage the forest to conserve and enhance the quality of water, air, and soil."	Yes	Application of related guidelines effectively supported this objective. Silvicultural Treatment Packages were consistent with this objective.

Silviculture		
"To regenerate both harvest and natural depletion areas using appropriate techniques at a level necessary to provide a sustainable and continuous supply of fibre to the Hudson Mill while maintaining forest sustainability."	Yes	The existing age class structure imbalance on the Lac Seul Forest is predicted to result in lower harvest levels and sawlog recovery in future planning terms. In response to this issue, an FMP objective is to normalize the age class distribution of the Forest over time. In order to move towards a sustainable and continuous supply of fibre to the Hudson Mill a FMP long-term target was to normalize the age class distribution of the forest over time. Results of regeneration activities on the Forest were excellent and the total area renewed was generally in balance with the area harvested.

We found the explanations provided in the 2006 RPFO for the partial achievement of management plan objectives to be reasonable.

Review of the RPFO Assessment of Sustainability

We examined both the 2001 RPFO and the interim 2006 RPFO in our review of the RPFO assessment of sustainability. The 2001 RPFO was based on Timber Management Plans (TMPs) written and approved under the Timber Management Planning Manual; therefore, it was not possible to complete an assessment of forest sustainability in the format required by the FMPM. TMPs did not provide any predictive indicators of forest sustainability (as is required in current forest management plans) and no values for the measurable indicators. As previously noted, sections of the 2006 RPFO assessment of sustainability could also not be fully completed, either because information was not available, or information was not available in a suitable format from earlier plan documents. Until several consecutive FMPs have been written information gaps related to forest sustainability will continue to exist.

In this and other audits we have noted systemic issues related to the rate of change of management strategies that makes reporting on the sustainability of Ontario's managed

forests difficult. The lag between the setting of measurable indicators of forest sustainability and the long time needed to collect and use the information in models to report on sustainability is a long term issue common to current FMPs. A second, and related issue is the rate of new guideline development and the degree to which their biological basis and the social, economic and environmental implications are understood. The rapid rate of change of guidelines (i.e. Moose Guidelines to Caribou Guidelines to NDPEG) and changes in data parameters used to assess sustainability has not provided enough time for proper monitoring and assessment of results.

It is important that when significant changes to guidelines and model parameters are being contemplated, that the OMNR consider the impact of those changes on;

- the ability to assess forest sustainability between successive FMPs,
- the ability to assess the impact of individual and cumulative guidelines on economic and ecological sustainability.

The guidelines may or may not be achieving their desired objectives. Regardless, the constant change means that there is only limited time to measure success or failure and only limited information to convey to the public, forest industry and OMNR staff. While it is not within the parameters of this audit to comment on corporate OMNR's production of guidelines, we do suggest it has a responsibility to measure and accurately report on the impacts its policies are having on long term forest sustainability.

Text and tables were completed to the extent possible. In general the RPFO assessment of sustainability was limited as a result of the large number of missing values from previous plan terms. Several tables related to forest sustainability (i.e. Summary Report of Measurable Indicators of Forest Sustainability Criteria, Summary Report of Landscape Processes, Summary Report of Habitat for Selected Wildlife Species, Summary Report of Landscape Diversity Indices) could not be completed as a result of differences in formats arising from earlier reporting periods. (i.e. only information on forest condition and the frequency distribution of clearcut and wildfire sizes was reported). In instances where data was lacking or incomplete the RPFO Author did not provide any interpretation of available data or postulate on emerging trends. However, the Author did indicate that sustainable harvest levels, adherence to implementation manuals, implementation of compliance monitoring programs and compliance reporting and the successful implementation of the renewal and maintenance programs all would contribute to the achievement of long term ecosystem health.

The change in frequency of disturbances shows a progression toward the desired template for all sizes classes except the 260-520 size class. Both the projected and actual disturbances in the 260-520 size class moved away from the template because the direction from different guidelines conflict with one another. The implementation of the *Forest Management Guidelines for the Provision of Marten Habitat* 1996 requires core areas of marten habitat that are 300 to 500 hectares in size.

For the production of the 2006 FMP, MFP staff informed us that movement towards the target template was hampered by the boreal standard requiring 80% of clearcuts to be less than 260 hectares in size. This resulted in movement away from the template in the 261-520 size class. MFP staff indicated that this requirement directly conflicts with the direction to move the Forest toward the natural template because pre-fire suppression disturbances often exceeded 260 hectares and the current forest condition exceeds the pre-fire level for disturbances less than 260 hectares. The direction also conflicts with direction from the marten and caribou habitat guidelines for much larger disturbances.

With respect to the 2006 FMP, the Forest Management Guide for Natural Disturbance Pattern Emulation (NDPEG) is intended to create a more natural landscape than one developed with the application of numerous individual species–specific wildlife habitat guidelines. The NDPEG includes "standards" that are mandatory requirements and "guidelines" that provide the forest manager with flexibility to interpret and adopt the requirement to meet specific local needs. The NDPEG provides a standard that *"...eighty percent (80% - Boreal forest) or ninety percent (90% - Great Lakes –St. Lawrence) of planned new clearcuts determined by frequency, beginning with plans approved in 2004, should be less than 260 ha in size"*

The NDPEG does provide flexibility in that it states, *" The creation of clearcuts greater than 260 ha in size can occur where it is consistent with the FMPM requirement for moving towards a more natural frequency/size class and where one or more of the following conditions are encountered:*

- *the clearcut is an attempt to "defragment" a previous group of smaller cuts;*
- *the clearcut is integrated as part of an overall strategy to provide wildlife habitat, and*
- *public concerns and concerns regarding impacts to other forest users have been addressed to the best of the planning teams ability.*

For the 2001 FMP the actual levels for the large size classes greater than 5,000 hectares exceeded projected levels because of the occurrence of Fire 48. Actual levels did not achieve projected levels in the size classes less than 5,000 hectares because harvesting strategies had to be altered during the implementation of the 2001 FMP to salvage large areas of Fire 48. A significant amount of harvesting activities was redirected from the harvesting of planned allocations to salvage fire 48 affected areas. This contributed to some planned areas not being harvested during the implementation of the 2001 FMP.

The results show that the land base managed for moose habitat has been reduced and the land base managed for caribou has increased. This occurred because the line for continuous caribou habitat has been moved south meaning the guidelines to manage caribou habitat applies to a greater proportion of the land base in the 2006 FMP. Small

changes over a five year term would normally be expected for each of the parameters. The table indicates more radical change than expected because the Forest Resource Inventory used to compute the 2001 FMP was replaced with a completely redone inventory based on ecosites.

Review of the Comparison and Trends Analysis of Planned vs. Actual Forest Operations Report.

The forest manager is required to complete a Comparison and Trends Analysis Report of Planned vs. Actual Forest Operations Report. This report was prepared by the forest manager as a requirement of the Independent Audit Process (Appendix A). The purpose of the Report is to look at trends in planned vs. actual forest operations over time in order to provide an interpretation of the current state of the Forest relative to its historic state. The Report was prepared in accordance with the requirements of Appendix C of the IFAPP.

The preparation of the Report was complicated due to the fact that the Lac Seul Forest was created from an amalgamation of management units that had different planning time frames and objectives. The Northwestern Regional OMNR provided a methodology for the preparation. Table 13 shows the groupings of management units and planning terms used in the preparation of the report.

TABLE 13. GROUPINGS OF MANAGEMENT UNITS AND PLANNING TERMS USED IN THE PREPARATION OF THE COMPARISON AND TRENDS ANALYSIS OF PLANNED VS. ACTUAL FOREST OPERATIONS REPORT.

Trend Analysis Term	Management Unit / Plan Term
Term A	SLCMU 1991-1996 Abitibi MU 1993-1998 Lac Seul Forest 1992-1997
Term B	SLCMU 1996-2001 Abitibi MU 1998-2001 Lac Seul Forest 1997-2001
Term C	Lac Seul Forest 2001-2006
Term D	Lac Seul Forest 2006-2001

The following trends are significant on the Forest:

1. The total area of Crown managed production forest land has declined (705,466 ha 1993-2001 to 682,439 ha in 2001-2006) . This decline reflects removals from the land base by Ontario's Living Legacy, removals for the creation of First Nation Reserves, removals for the creation of conservation areas and conservation reserves, amalgamation of management units, and area differences attributed to the transition to a spatial inventory.
2. The land base changes make it difficult to assess changes in forest unit area and age class. The most significant change associated with forest composition is a shift from balsam fir working groups to low stocked spruce and hardwood working groups as a result of balsam fir mortality attributed to spruce budworm.

   Field observations indicate that balsam fir is re-establishing within budworm affected stands. The FRI does not reflect this ingress as the fir is currently occupying understory positions in the canopy. Future inventories can be expected to show an increase in the working group as the trees mature and begin to occupy positions in the stand overstory.
3. There has been an overall decline in the area of land classified as barren and scattered or non-satisfactorily regenerated since Term A (63,820 ha to 58,610 ha, (see Table 14)). However the area has increased in the current plan term due to inclusion of Fire 76 burn.
4. Actual harvest levels (area and volume) were below planned for all terms (Figures 6 and 7). The underachievement is attributed to operating constraints which resulted in more bypass and lower than anticipated volumes being harvested, mill closures, underutilization of some species due to poor markets and a large fire (Fire 48) which halted operations during 2003 and necessitated salvage operations between 2003 and 2006. Harvest volumes realized in salvage operations were lower than would be achieved in "normal" operations.

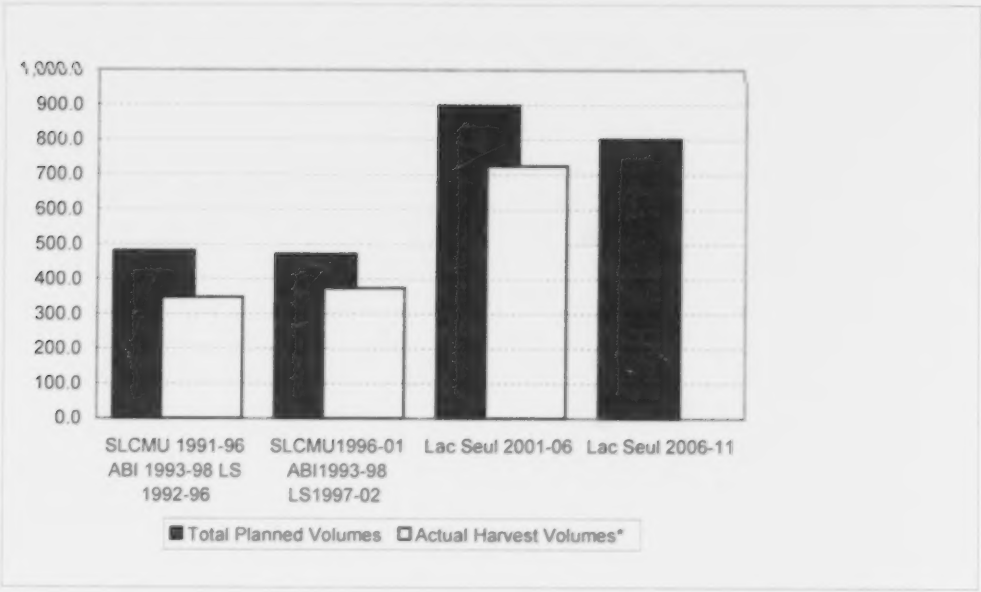


FIGURE 6. ACTUAL VS. PLANNED HARVEST VOLUMES (1991-2011)

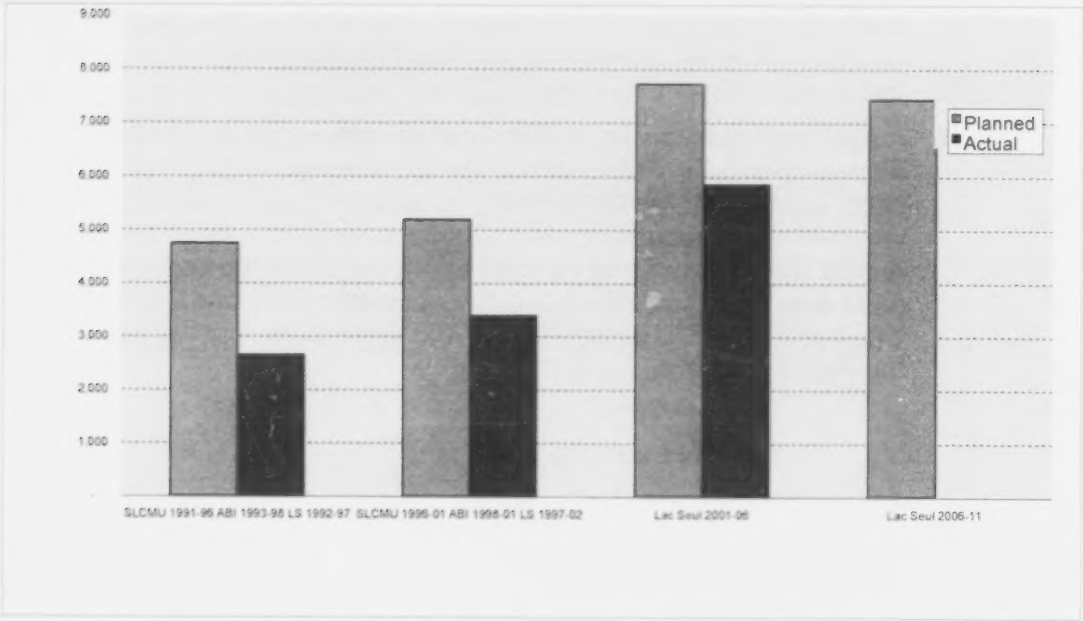


FIGURE 7. ACTUAL VS PLANNED HARVEST AREA (1991-2011)

5. Actual renewal levels were below planned levels (78% of planned) but are generally in balance with the area harvested. The proportion of area treated by artificial regeneration is increasing. This trend is attributed to harvest taking place on more competitive sites which require artificial renewal to ensure successful re-establishment of conifer species. Artificial renewal by seeding was significantly higher than planned (actual 28,095 ha vs. 6,248 planned) as this treatment was adopted as the primary renewal strategy for treating the area burned by Fire 38. Natural regeneration achieved 50% of the planned level for the 2001-2006 plan term reflecting lower than planned harvest levels.
6. Tending treatments exceeded planned levels for each term. The higher than anticipated levels are attributed to the shift towards the harvest of more competitive sites which require subsequent treatments. In past plans more competitive sites (with significant amounts of hardwood) were avoided due to poor markets for hardwood material. Improved markets for hardwood chips have now directed harvesting to those sites.
7. Pre-commercial thinning was not undertaken during the 2001-2006 period because Fire 48 destroyed older plantations scheduled for thinning.
8. Mechanical site preparation levels were 53% of planned levels in the 2001-2006 term due to efforts to move towards planting without site preparation on thin duff sites. Chemical site preparation was lower than planned (11%). Field staff determined that sites designated for chemical site preparation could be planted and then tended by aerial herbicide application at lower cost.
9. Areas surveyed for regeneration success indicate that the forest is regenerating. For the period 1991-1996 99% of the surveyed area was satisfactorily regenerated (Figure 8).

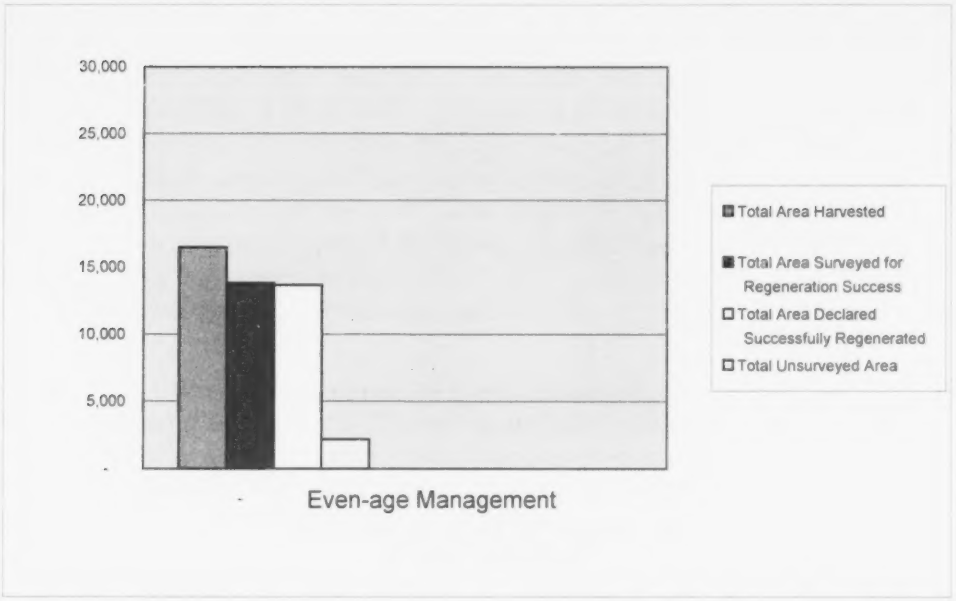


FIGURE 8. REGENERATION SUCCESS 1991-1996

Achievement of Forest Sustainability

To measure the achievement of sustainability we examined the FMPM requirements for forest sustainability and the performance of the licencee during the audit period. At the management unit level, the FMPM has five criteria used in the determination of sustainability. These are biodiversity, forest condition and ecosystem productivity, soil and water quality, multiple benefits to society, and accepting society's responsibility for sustainable development.

A series of measurable indicators has been developed for each of these criteria. These indicators are critical for;

- The assessment of individual Forest Management Plan alternatives.
- The assessment of trends over successive Management Plan periods.

Outlined below is our assessment of sustainability for the 2001 and 2006 FMPs.

Biodiversity

The 2006 FMP contained the required indices to describe landscape patterns and forest diversity. These included edge, interior, fragmentation, isolation, spatial patterns and forest diversity. All indices calculated in the 2006 plan fall within acceptable levels.

The Selected Management Alternative was designed to deal with the rate of declining wood supply, long term wood supply gaps, forest renewal and the attainment of biodiversity and wildlife objectives.

Forecasted depletions for the 2001 FMP showed considerable movement towards a template for a pre-fire suppression forest. Movement in frequency distribution by size class toward the template occurred in all but the 131-260 and the 261-520 hectare classes. Movement in area by size class toward the template occurred in all but the 521-1040 hectare and the 2501-5000 hectare classes. Forecasted depletions for the 2006 FMP indicated that the Lac Seul Forest is "*making progress in all size classes identified in its approved Natural Disturbance Template with the exception of 260-520 hectare size class*". The Selected Management Alternative makes movement toward natural disturbance frequency as defined by the Template. It is our assessment that biodiversity requirements have been adequately addressed.

Forest Condition and Ecosystem Productivity

The stability of forest cover types is an indicator of forest sustainability. The forest manager is required to determine if major changes in the desired future forest occur between one plan and the next.

The description of forest units varied between the three analyzed forest management units however, generally there was a fairly consistent forest condition from the start to the end of the planning term. Most species groups were stable, although there were decreases in black spruce and balsam fir and an increase in the red pine/white pine forest unit. The decreases were explained by the net decrease in the amount of managed Crown forest area available for timber production, an increase in land designated Barren and Scattered / Not Sufficiently Regenerated, and mortality in balsam fir due to spruce budworm infestations.

Base values for net primary productivity (NPP) were calculated for the Forest and fall within the bounds of natural variation.

A comparison of regeneration results with harvested area for the five-year period from 1991 to 1996 indicated that harvest and renewal activities were in balance. Of the 13,800 hectares surveyed for regeneration, 13,657 hectares were successfully regenerated

Our assessment is that forest condition and ecosystem productivity requirements have been met.

Multiple Benefits to Society

The amount of managed Crown forest area available for timber production (as defined by Total Production Forest) decreased from 705,000 ha in 1991 to 682,000 ha in 2001 due to several factors, including forest unit amalgamations, removal of land for a First

Nation reserve and removal of land for new areas protected under Ontario's Living Legacy program.

Actual harvest area varied from 56% to 71% of planned area over the 3 planning terms analyzed in the Trends analysis. Actual levels were 71% for the 2001-06 planning term (excluding 2005-06 data). Reasons for harvest area falling below planned levels include:

- A two-month halt in operations due to a major fire.
- Difficulties in achieving full utilization of some species because of limited markets.

The Selected Management Alternative struck the best balance for meeting the sustainability indicators, achieving socio-economic objectives and achieving all other objectives. However, the current age class structure imbalance contributes to lower harvest levels and sawlog recovery predicted in future planning terms. The impact of natural loss of timber due to wildfire and the effect of wildlife guidelines continue to be discussed relative to their effect on long term wood supply.

The 2006 FMP SMA kept levels of habitat for all the selected wildlife species above natural bounds.

Forest management activity can affect the remote tourism industry and recreational access to the Forest's resources. It is our assessment that the Selected Management Alternative achieved the best balance of all access related objectives. Despite this, access issues, including the use of access control continue to be a concern for all the users of the Forest.

The Selected Management Alternative provided the best balance of benefits to society.

Soil and Water Conservation

Net primary productivity (NPP) and water yield are expressions of landscape processes, which are measurable indicators of forest sustainability. Base values for net primary productivity and water yield were calculated for the Forest. These values will have to be compared to future values to assess trends.

The total disturbance (including clear cuts and burns) for the past ten years within second order stream watersheds accounted for 9.42%. The previous plan disturbance in second order watersheds was 8.35%. The increase of 1.07% between the 2001 and 2006 FMPs is acceptable and alterations to harvest blocks are not required. Additionally, our field inspections indicated that forestry operations on the Forest protected soils and water, and were conducted in accordance with the guidelines.

Accepting Society's Responsibility for Sustainable Development

First Nations located on and adjacent to the Forest were provided with full opportunity to become involved in forest management planning and operations (Section 3.2.3.). MFP demonstrated a strong commitment to forest renewal and maintenance was evident in the field phase of this audit. Funding levels available for silviculture were sufficient to conduct all planned activities.

Another measure of "accepting society's responsibility for sustainable development" is public and LCC satisfaction with their participation in the forest management planning process. Interviews with the public and a review of the OMNR correspondence file indicated that the public was generally satisfied with their level of participation in the FMP process. Issues associated with the poor LCC performance are discussed in Section 3.2.1.It is our assessment that this criterion was met.

Sustainability Conclusion

In the preceding sections we completed an examination and provided an assessment of:

- The achievement of management objectives.
- The 2001 and 2006 RPFO's assessment of sustainability.
- The Comparison and Trend Analysis of Planned vs. Actual Forest Operations.
- Criteria for the achievement of forest sustainability.

Management objectives for the Forest were largely achieved (age class structure imbalances will result in lower harvest levels and sawlog recovery in the future); a mechanism and indicators were in place for longer term assessment of sustainability; the Forest was being regenerated following harvest; forest management actions were designed to emulate a forest characterized by natural disturbances; the basic productivity of the forest was being preserved; and sustainable benefits were being received.. We therefore conclude that the Lac Seul Forest is being managed sustainably.

3.8. Contractual Obligations

Table 14 provides our assessment of the MFP's level of achievement of its contractual obligations for the 2001-2006 audit period. Our assessment is based on the twenty five criteria in the 2006 Independent Forest Audit Process and Protocol (IFAPP).

TABLE 14. SUMMARY OF IFAPP CONTRACTUAL OBLIGATION CRITERIA AND AUDITOR ASSESSMENT OF THE LEVEL OF ATTAINMENT OF THE CONTRACTUAL OBLIGATIONS FOR SFL # 542455

2006 IFAPP Contractual Obligation Criteria	Auditor Assessment
1. Complied with the terms and conditions of the SFL.	MFP complied with the terms and conditions of the SFL license.
2. Payment of Forestry Futures and Ontario Crown Charges.	Forestry Renewal Payments are in arrears. The OMNR has negotiated a repayment schedule, which will involve the first payment being made in December 2006, with the final repayment of the deferred renewal and futures charges scheduled for December 2007. Deferred stumpage payments are scheduled to be repaid by March 2008.
3. Wood Supply Commitments. The Company had 4 Appendix "E" commitments. MFP was to supply Columbia Forest Products Inc. with an annual supply of veneer quality wood if a mill was constructed in Northwestern Ontario. MFP was to supply Buchanan Northern Hardwood Inc. with a long term MOA 20,000 m^3 MFP was committed to providing the Weyerhaeuser Company Limited mill in Dryden with Poplar and white birch on a long term basis via a MOA. MFP was committed to provide Atikokan Forest Products with 41,000 m^3 of conifer roundwood annually for use in the Atikokan sawmill.	During the audit period amendments were made to Appendix "E" to reflect changes that occurred with the issuance of new wood supply agreements. These included: The wood supply commitment to Columbia Forest Products (CFP) was discontinued with the cooperation of CFP. The commitment for poplar veneer was to be supplied by other companies. A MOA between Weyerhaeuser and MFP has not been signed. MFP supplies Weyerhaeuser with 100,000 m^3 of hardwood annually through a business to business agreement. A new commitment for a poplar veneer wood supply to Longlac Wood Industries was added to Appendix "E".

	The wood supply commitment to Buchanan Northern Hardwoods is under review. Wood supply arrangements to Atikokan Forest Products were amended in 2005 to remove the Lac Seul Forest. In our assessment wood supply commitments were appropriately met.
4. Allowable harvest levels meet contractual obligations.	MFP generally met their harvest obligations. The Company harvested 76% of their planned harvest. Harvest operations were disrupted by Fire 48 in 2003 and by mild weather during the audit period which prevented harvesting of some lowland spruce sites. Wood product market conditions were weak for much of the audit period so the overall achievement of contracted wood supply agreements was poor.
5. Prepare FMP, AWS, and other reports in accordance with FMPM.	This requirement was met.
6. Conduct inventories and surveys as required in FIM.	The Lac Seul Forest was re – inventoried for the preparation of the 2006 FMP. All records were updated and met the FIM requirements. The updates included all depletions plus the Free to Grow survey information collected between 1997 and 2002.
7. Provide information as required in FIM manual.	The FRI was updated and completed as required. Our investigations found that all FIM requirements were met.
8. No wasteful practices.	While there were 2 wasteful practices reported (for large tops) non-compliance was not an issue on the Forest.

9. Salvage conditions.	Fire 48 (2003) disrupted the normal MFP harvest operations for the remainder of the FMP term. The fire resulted in the salvage of approximately 6,120 ha. All resulting salvage operations were approved as required in the AWSs. MFP harvested 475,000 m^3 of conifer and 69,000 m^3 of hardwood from the burned area. Salvage operations were amended into the FMP and scheduled in the AWS.
10. Pest control operations must be undertaken as required.	No pest control operations were conducted during the audit term.
11. Adherence to land withdrawal procedures.	Land withdrawal procedures were followed.
12. Prepare an Audit Action Plan within 2 months of receiving the final audit report. Prepare a status report within 2 years of approval of the Action Plan.	Action Plan and Action Plan Status Reports were submitted late. The report contents properly addressed all requirements. Actions were taken on all recommendations.
13. Payment of Forest Renewal Trust renewal charges.	The required minimum balance was maintained in each of the 5 years. MFP is in arrears with respect to stumpage payments. The OMNR has negotiated a repayment schedule, with all deferred stumpage payments to be repaid by March 2008.
14. Five-year analysis of forest renewal trust account.	The five-year analysis of the forest renewal trust account was completed. A suggestion is provided to more closely align modeled renewal costs to actual costs incurred.

15. Minimum balance maintained in Renewal Trust Account.	MFP met their minimum balance requirement.
16. Maintain records of eligible silvicultural work for Renewal Trust account projects.	Based on the field audit sample we conclude that all of the required information, maps, project records, and financial records were in place. Our 20% sample of the areas identified in the Specified Procedures Report (2004) found that field project activities matched the information in the project records.
17. Silvicultural Standards must be followed.	All silviculture standards were fully met. Based on field inspections, silvicultural activities were appropriate for site conditions.
18. Report on the achievement of regeneration including the assessment of free-to-grow and preparation of stand descriptions for entry into the inventory.	Free-to-grow surveys were conducted and the FRI had been updated to reflect survey findings.
19. Work co-operatively with aboriginal communities.	MFP met the requirements of the FMPM and EA conditions 34 & 77.
20. Prepare a forest compliance plan.	Forest Compliance Plans were produced according to guidelines.
21. Deliver compliance training for staff.	Compliance training was provided to designated staff as required.
22. Conduct inspections of forest operations and deliver reports to OMNR in accordance with the approved plan.	Compliance reports were delivered on time and in accordance with the approved plan.
23. Assume responsibility for activities on mining leases or claims and advise claim holders.	All responsibilities were met; claim holders were notified by OMNR following receipt of the AWSs from MFP.

24. Road Maintenance Agreement between OMNR and MFP.	Requirements of the Road Maintenance Agreement were met. We determined that the roads were maintained as invoiced.
25. MFP had a commitment to provide an opportunity to conduct harvest operations through MOAs, to 12 operators who were formerly traditional operators on the Sioux Lookout Forest. This commitment is identified as a special condition in Appendix F of the SFL.	MFP had MOA's in place with 11 of FRL holders, all of whom had received a harvest allocation. While a formal FRL was available for the Lac Seul First Nation it had not been issued at the time of the audit. All FRL holders except two (red pine log home builders) had harvested their allocation.

Progress on Recommendations from Previous Audits

Final reports on the recommendations for the 2001 Independent Audits conducted on the Lac Seul Forest and the Sioux Lookout Forest were submitted in June 2002. The IFAPP requires that the OMNR prepare an Action Plan within 2 months of the receipt of the final audit report. The Action Plans for both Forests were submitted in December 2002 approximately 4 months late. A Status Report summarizing progress is required within 2 years following the approval of the Action Plan. The Action Plans were approved in January 2003 and Status Reports were due in January 2005. The Status Reports for both Forests were submitted in June 2006, approximately 16 months late.

Recommendation # 11:

The OMNR District and MFP must adhere to deadlines for Action Plans and Status Reports required in response to Independent Forest Audit recommendations.

Information contained in the Action and Status Reports was complete and included:

- The action required.
- The organization and individual position responsible for doing the work.
- Deadline dates.
- A method for tracking progress of the action plan.

Our assessment of the reported progress and completion of Action Plan items is discussed in Tables 15(a) and 15(b).

TABLE 15 (A). REPORTED PROGRESS OF ACTION PLAN ITEMS – LAC SEUL FOREST

#	2001 IFA Recommendation Lac Seul Forest	MFP and OMNR Status Report on Recommendation	Auditor Observation
1	Taking into account the concerns of the LSAC, the audit team recommends that the Company proceed with the implementation of harvest and renewal operations within selected areas of the 120 m shoreline buffer on Lac Seul.	OMNR and MFP developed an implementation strategy. An amendment to establish demonstration areas was made to the 2001 FMP. Wildfire destroyed 2 potential demonstration areas in 2003. -Regeneration has been completed in salvage areas from the fire within the 120 meter buffer zone. Plans are to develop new areas.	No demonstration areas were set up. Red pine had been planted in the 120 m buffer. OMNR and MFP are pursuing further discussions with the LCC, Lac Seul Advisory Committee and the public.
2	To improve the communication between forest stakeholders and the LSAC for the management of the shoreline, the audit team recommends that at least one member of the LSAC be from the forest industry.	Completed	A MFP representative has been a member since 2002.
3	The Audit Team recommends that the MNR and the Company	Road is complete.	The road was complete at the time of the field audit.

	continue to negotiate with the Slate Falls First Nation to seek their concurrence for building the access road and conducting forest management activities in Working Circle # 3.	Negotiations are ongoing with Slate Falls First Nation to conclude a forestry agreement.	Negotiations are underway to conclude the forestry agreement.
4	The audit team recommends that, when previously unidentified small or intermittent streams are encountered the Code of Practice for Timber Management Operations in Riparian Areas should be followed. For those streams that are likely to provide spawning habitat for fish, the Company should proceed to apply for a stream crossing or water quality reserve amendment.	Incorrectly or unmapped streams no longer require an FMP amendment. However, all required FIM information must be provided to OMNR within 10 days. NRVIS water layer will be updated yearly starting in 2006.	Our assessment is that the issue has been satisfactorily resolved through changes to the FMPM and ongoing company actions.
5	The audit team recommends that the company update the Lac Seul Forest Inventory records by incorporating all the historical records of the former Sioux Lookout Crown Management Unit Forest.	Completed	All available historical records for the former Lac Seul and Sioux Lookout Forests were transferred to NAD83 by tagging past depletions with the appropriate development stage and silvicultural intensity. The stewardship and planning inventories used to prepare the 2006 FMP incorporated all available annual report records for depletions, silvicultural accomplishments and

			free to grow records. All future record keeping will be tracked in NAD83 projection. Implementation of this action item has been completed.
6	The audit team recommends that the Company document their process for assessing sites for tending and developing appropriate prescriptions.	A prescription protocol has been finalized which includes a linkage to a spray assessment protocol and a tending and maintenance protocol. - OMNR is reviewing the protocols.	A prescription protocol has been finalized which includes a linkage to the spray assessment protocol and the tending and maintenance protocol. Our assessment of the tending program was that MFP has an effective program.
7	It is recommended that the Company ensure that annual reports are complete and contain a copy of the OMNR's Native Consultation Report.	Completed.	An appendix has been added to the Annual Reports for the OMNR's Native Consultation Report. The Company has received Native Consultation Reports annually from OMNR.

8	It is recommended that the Company continue its progress toward achieving the silviculture standard on all Class B and D Lands as required by the SFL.	Company has made significant progress by achieving FTG status ABCD lands.	An analysis was done for the 2005 status report to assess the current status of Class B and D lands. The results of the analysis showed that there had been significant progress. The 2005 analysis showed that the FTG status of Class B and D lands had increased from 28% to 83%. The 2006 FRI shows that 0.1% of Class B and D lands are protection forest, unproductive or unclassified land. The 2006 FRI also showed 10% of Class B and D lands had burnt in wildfires after the obligations were set by the Sustainable Forest Licence (SFL). The lands burnt by wildfire will require additional time to reach FTG status.

9	The audit team recommends that the Company continue to pursue the development of long term memorandum of agreements for viable hardwood markets as outlined in their SFL.	Partial	The utilization of hardwood has exceeded expectations from the 2001 FMP. White birch and poplar were under-utilized in previous planning terms. MFP had developed markets for poplar and white birch and all available volumes of these species will be utilized. Hardwood species are processed in Hudson. Bush chippers are being used on the Lac Seul Forest to produce softwood and hardwood chips from otherwise unmarketable species and/or diameter size classes. The recent closure of some mills may impact the current utilization of hardwood species.
10	Based on the results of the audit, the audit team recommends that sustainable licence # 542455 for the Lac Seul Forest be extended for a further 5 year term.	Licence was extended.	No comment required.

TABLE 15 (B). REPORTED PROGRESS OF ACTION PLAN ITEMS – SIOUX LOOKOUT FOREST

#	2001 IFA Recommendation Sioux Lookout Forest	Status Report on Recommendation	Auditor Observation
1	To improve the communication between forest stakeholders and the LSAC for the management of the shoreline, the audit team recommends that at least one member of the LSAC be from the forest industry.	Completed, April, 2002	A MFP representative has been a member since 2002.
2	Taking into account the concerns of the LSAC, the audit team recommends that the Company proceed with the implementation of harvest and renewal operations within selected areas of the 120 m shoreline buffer on Lac Seul.	OMNR and MFP developed an implementation strategy. An amendment to establish demonstration areas was made to the 2001 FMP. Wildfire destroyed 2 potential demonstration areas in 2003. Regeneration has been completed in salvage areas from the fire within the 120 meter buffer zone. Plans are to develop new areas.	No demonstration areas were set up. Red pine had been planted within the 120 m buffer. OMNR and MFP are pursuing further discussions with the LCC, Lac Seul Advisory Committee and the public.

3	The audit team recommends that all amendments to the plan be appropriately documented.	Completed.	Required documentation for amendments was completed. All amendment requests conformed to required directions.
4	The audit team recommends that the company update the new Lac Seul Forest inventory records by incorporating all the historical records of the Sioux Lookout Forest and Parcel 1 of the Abitibi Sioux Lookout Management Unit.	Completed.	All available historical records for the former Lac Seul and Sioux Lookout Forests were transferred to NAD83 by tagging past depletions with the appropriate development stage and silvicultural intensity. The stewardship and planning inventories used to prepare the 2006 FMP incorporated all available annual report records for depletions, silvicultural accomplishments and free to grow records. All future record keeping will be tracked in NAD83 projection. Implementation of this action item has been completed.
5	The audit team recommends that the Company develop a formal procedure to assess sites for tending requirements and for developing appropriate prescriptions.	A prescription protocol has been finalized which includes a linkage to a spray assessment protocol and a tending and maintenance protocol. OMNR is reviewing the protocols.	A prescription protocol has been finalized which includes a linkage to the spray assessment protocol and the tending and maintenance protocol. The tending program is effective.

6	The audit team recommends that the Company continue to develop and search for new viable hardwood markets.	An ongoing process.	Contractual commitments are covered in Section 3.8. We note that supply agreements have been approved, and future negotiations are planned for new supply agreements. Hardwood species are being processed in Hudson and turned into sawlogs or chips.
7	The audit team recommends that the Company and the MNR develop silvicultural methods and obtain funding to renew decadent balsam fir stands to desired species so as to take advantage of these highly productive areas.	Harvesting of low volume balsam fir stands is continuing. MFP is investigating using bush chippers to harvest budworm damaged stands. Various actions have been taken and/or are underway with respect to Forest Accord 11 (funding). Prescribed burning has been rejected by OMNR and MFP due to costs.	Our assessment is that the MFP and OMNR have investigated, and continue to investigate all practical options. Chipping operations have proven to be an economically viable operation within some stands under certain conditions.
8	The audit team recommends that pursuant to the terms of the licence, that the licence be withdrawn	OMNR and MFP decided to renew the operators licence.	We disagree with the OMNR action. The operator had not completed any harvesting at the time of the field

	from the individual that did not cut any red pine over the audit period.		audit. He has tied up a public resource for a decade without any action. We note the OMNR and MFP have issued a licence and an agreement has been signed. A recommendation has been provided in Section 3.4.2.
9	It is recommended that the Company continue its progress toward achieving the silviculture standard on all Class X and Y Lands as required by the SFL.	XYZ lands will be surveyed for FTG for the 2011 FMP. FTG records were incorporated into the inventory for the 2006 FMP. Renewal treatments will be completed on XYZ lands that have not reached FTG.	An analysis was done to assess the status of Class X and Y lands in 2005. The results of this analysis indicated progress is being made. The 2001 assessment indicated that none of the XYZ lands were FTG and that 333 hectares had received a renewal treatment. The 2005 assessment indicated that 1,399 hectares of XYZ lands had reached FTG status and 6 hectares have a non-productive or protection forest status.
10	Based on the results of the audit, the audit team recommends that the licence with the former Sioux lookout Forest (SFL # 542443) be extended for a further 5 years as part of the Lac Seul Forest SFL # 542455.	Licence was extended.	No comment required.

4.0. SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Eleven recommendations and five suggestions are made to address issues identified during the audit. These are summarized in Table 16, Section 5.0.

Commitment

McKenzie Forest Products Inc and OMNR Sioux Lookout District complied with all IFAPP requirements with respect to development of corporate directions and commitments to forest and ecosystem sustainability, communications and training.

Public Participation

Public participation in the 2006 FMP planning process met the requirements of the FMPM including all requirements with respect to First Nation consultations and efforts to involve native peoples in forest management.

The LCC was properly established and was involved in the preparation of the plan. However, a combination of perceived conflicts of interest, conflicting personalities and poor attendance fundamentally hindered the Committee's performance and contribution. Despite this, OMNR and MFP were diligent in ensuring that all information and contact requirements associated with the LCC were met.

We feel that there are fundamental problems associated with OMNR's expectations of LCCs. We recommend the adoption of much more flexibility in the development of LCC Terms of References, and more authority for District Managers to utilize the Committee in a manner that best suits the interests and abilities of available members.

A procedural error resulting in a missed opportunity for the public to comment on some proposed access controls was being dealt with appropriately. However, we are concerned that a pending MOE decision on two Environmental Assessment Act bump-up requests was approximately three and one-half months late at the time of the field audit.

There are continuing resource access issues on the Forest. We encourage OMNR and MFP to become familiar with how similar issues are being dealt with elsewhere in the province to determine if any results are applicable to the Lac Seul situation.

Forest Management Planning

The 2006 FMP planning process was in accordance with FMPM requirements. The planning team and its task teams functioned efficiently and a Steering Committee provided support to the planning team that was highly beneficial.

OMNR and MFP worked diligently on the development of Resource Stewardship Agreements; however, although 18 agreements were negotiated only one RSA was completed using the full RSA format. We are of the opinion that the RSA process needs to be reviewed.

Operational planning requirements were in compliance with the FMPM.

Plan Implementation

The implementation of the FMP during the audit period was substantially in compliance with FMPM requirements. In our opinion the forest is well managed.

- The area renewed is generally in balance with the area harvested.
- AOCs were properly planned, implemented, and monitored.
- There was excellent regeneration success.
- Wood utilization on inspected harvest areas was very good.
- There was a good compliance record on the Forest.
- All water crossings we examined met standards and requirements.
- Harvest and renewal efforts were approved in the AWS, and SGRs were appropriate and properly implemented.

However, there were some shortcomings and concerns:

- Full utilization of planned levels of larch, poplar, and white birch has historically been problematic and remains an issue on the LSF.
- Allocations of red pine were chronically underutilized.
- It is important that MFP and OMNR carefully analyze the forest sustainability effects before making major changes to the slash management program.
- Some improvements could be made in the consistency of recording information in Strategic Forest Management Modeling.

System Support

OMNR and MFP had effective training programs in place and both had effective record systems.

MFP organizational charts were comprehensive with clear identification of duties and responsibilities. Both organizations' staff were knowledgeable and professional in carrying out their responsibilities.

Monitoring

MFP produced a Five Year Compliance Strategy and the OMNR District produced Annual Compliance Operation Plans. All compliance planning responsibilities were met.

The level of compliance inspection activity was appropriate to the level of operations and there was a good compliance record on the Forest. The timing of compliance reporting improved through the audit period.

Silvicultural effectiveness monitoring was planned and undertaken.

Achievement of the Management Objectives and Forest Sustainability

Based on our assessment of field performance, forest sustainability criteria, documentation review and the achievement of management objectives we conclude that the Lac Seul Forest is being managed sustainably.

Contractual Obligations

Contractual obligations were substantially met. MFP was found to be in arrears with respect to stumpage payments. OMNR has negotiated a repayment schedule under which deferred stumpage payments are scheduled to be repaid by March 2008.

5.0. AUDIT CONCLUSION

Section 2.1 outlines the principles against which the performance of the forest manager is measured. During the audit period, MFP and OMNR Sioux Lookout District were in compliance with the legislation, regulations, and policies that were in effect at the time of the audit.

We conclude that the Lac Seul Forest is being managed sustainably, and MFP met its management obligations.

Recommendation # 12:

The Minister of Natural Resources should extend Sustainable Forest Licence (SFL) # 542455 for a further 5 years.

Table 16 provides a summary of our recommendations and suggestions by IFA principle.

TABLE 16. SUMMARY OF THE AUDIT RECOMMENDATIONS AND SUGGESTIONS

Principle 1: Commitment
No recommendations or suggestions.
Principle 2: Public Participation
Recommendation # 1: The OMNR District Manager should continue to review the LCC membership, structure, and processes and take action to increase its effectiveness in citizen participation and forest management. **Recommendation # 2:** Corporate OMNR should provide a clear explanation to OMNR District Managers outlining the flexibility they have with respect to LCC membership, TOR development and the operation of the LCC. **Recommendation # 3:** Corporate OMNR should continue to encourage corporate MOE to provide a decision on the two outstanding EA bump-up requests. **Suggestion # 1:** The Sioux Lookout District and MFP should familiarize themselves with the implementation of the 2005 Northeast Regional Advisory Committee Report on resource access to determine if any of the results can be applied to the Lac Seul situation.
Principle 3: Forest Management Planning
Recommendation # 4: Corporate OMNR should lead a review of the RSA process as outlined in the "*Guide to Resource Stewardship Agreements*" to determine if its effectiveness and efficiency can be increased. **Recommendation # 5:** OMNR Sioux Lookout should enhance its socio-economic information base related to road based recreationalists and should encourage the Ministry of Tourism to provide the same for remote tourism operations on the Lac Seul Forest.

Recommendation # 6:

MFP should ensure that all FMP tables and the SFMM model report available, reserved, and park areas consistently and accurately.

Best Management Practice:

The use of scale pile data by MFP to calibrate the yield curves used in SFMM modeling.

Suggestion # 2:

The OMNR and MFP should ensure that future FMP Planning Committees maintain adequate minutes of meetings and deliberations.

Suggestion # 3:

MFP and OMNR need to ensure that renewal trust fund revenues remain sufficient to ensure that required silvicultural activities are undertaken to sustain the selected wood supply.

Principle 4: Plan Implementation

Recommendation # 7:

Corporate OMNR and senior industry representatives should jointly commission an independent assessment of guideline impacts on several representative Forests in northern Ontario.

Recommendation # 8:

The OMNR review of the NDPEG should involve planning team members, field practitioners, and managers (forest industry and OMNR) with direct experience and knowledge of NDPEG implementation and associated issues.

Recommendation # 9:

The OMNR District Manager should remove the operators licence if the full red pine allocation is not harvested by the end of the licence term.

Recommendation # 10: OMNR District and MFP should conduct a review to determine the most effective method of making the limited red pine allocation available to the public and to the commercial log building industry. **Suggestion # 4:** MFP should create a section specifically for "sensitive sites" within their EMS program to provide direction for how to minimize rutting and what actions to take when rutting occurs.
Principle 5: Systems Support
No recommendations or suggestions.
Principle 6: Monitoring
Suggestion # 5: OMNR and MFP senior compliance staff should monitor results from FOIRs and continue efforts to reduce the gap between the two organizations in their respective assessments of non-compliance.
Principle 7: Achievement of Management Objectives and Forest Sustainability
No recommendations or suggestions.
Principle 8: Contractual Obligations
Recommendation # 11: The OMNR District and MFP must adhere to deadlines for Action Plans and Status Reports required in response to Independent Forest Audit recommendations.
Summary of Conclusions and Recommendations
Recommendation # 12: The Minister of Natural Resources should extend Sustainable Forest Licence (SFL) # 542455 for a further 5 years.

Appendix A

Comparison and Trend Analysis of Planned vs. Actual Forest Operations Report.

The Comparison and Trend Analysis of Planned vs. Actual Forest Operations is prepared by the forest manager (McKenzie Forest Products) responsible for forest management on the Forest. It is the forest manager's sole responsibility and is included in this report without modification or adjustment by the auditor.

LAC SEUL FOREST
2006 INDEPENDENT FOREST AUDIT

COMPARISON AND TREND ANALYSIS OF PLANNED VS. ACTUAL FOREST OPERATIONS

Prepared by Alan Brailsford RPF and Glen Niznowki RPF

Oct 13, 2006

We hereby certify that we have prepared this trends analysis to the best of our professional skill and judgment.

REGISTERED PROFESSIONAL FORESTER 1220 A. G. BRAILSFORD ONTARIO

A Brailsford Oct 13, 2006

REGISTERED PROFESSIONAL FORESTER 1767 GLEN P. NIZNOWSKI ONTARIO

Glen Niznowski Oct. 13/2006.

Introduction

The completion of the Comparison and Trends Analysis Report is a required component of the Independent Forest Audit (IFA) process described in "*Independent Forest Audit Process and Protocol*" February 2006. McKenzie Forest Products prepared the analysis for 2006 IFA.

The Lac Seul Forest (SFL No. 542455) is an amalgamation of three former management units. These former units include: the "old" Lac Seul Forest (SFL No. 542455) and the "old" Sioux Lookout Forest (SFL No. 542443) both held by McKenzie Forest Products Inc. (MFP) and these Sustainable Forest Licences were amalgamated into the Lac Seul Forest in July 2002. The former Sioux Lookout Crown Management Unit (SLCMU) and Parcel #1 of the former Abitibi Sioux Lookout Management Unit (Abitibi MU), also known as "Block 9", were amalgamated into the Sioux Lookout Forest in June 1998. The boundaries of the former SLCMU were established in 1986. The former Lac Seul Forest was created in 1987 with the signing of the Forest Management Agreement. The boundaries of the Abitibi MU were established in 1971.

Forest management planning and forest renewal work on the Lac Seul Forest was the responsibility of McKenzie Forest Products for the three planning terms (1991-97, 1997-2002 and 2001-2006) considered in this analysis.

The MNR was responsible for forest management planning and plan implementation on the former SLCMU for the 1991-1996 planning term. The MNR prepared the 1996-2001 FMP for the Sioux Lookout Crown Management Unit and was responsible for FMP implementation from 1996-1998. In June 1998 McKenzie Forest Products assumed responsibility for FMP implementation including renewal work with the amalgamation of the SLCMU into the Sioux Lookout Forest. The Company and traditional Crown operators successfully negotiated a business relationship as described by a Memorandum of Agreement that saw the continuation of harvesting quotas maintained on the former SLCMU for each of the traditional operators.

FMP Planning was the responsibility of Abitibi-Consolidated for the 1993-1998 planning term on the Abitibi MU and McKenzie Forest Products co-authored the FMP with Abitibi. Prior to 1998 all renewal work on the Abitibi MU was the responsibility of the MNR. In June 1998 Mckenzie Forest Products assumed full responsibility of management planning and renewal work for the Abitibi MU (Parcel 1) when it was amalgamated into the Sioux Lookout Forest in 1998.

The 2001-2006 Lac Seul FMP prepared by McKenzie Forest Products includes all areas of the former Sioux Lookout Forest which includes the former Sioux Lookout Crown Management Unit and Parcel 1 of the former Abitibi Sioux Lookout Management Unit.

The preparation of the trends analysis was complicated because the Lac Seul Forest was created from an amalgamation of management units that had different planning

time frames and objectives. The Northwestern Regional MNR provided direction about methodology for completing the trends analysis. The MNR suggested grouping time frames for each of the former management units consistent with the FMPs for each of the management units. Based on MNR direction the earliest term for the trends analysis includes the 1992-1997 FMP term for the "old" pre-amalgamation Lac Seul Forest, the 1991-1996 FMP term for the former Sioux Lookout Crown Management Unit and the 1993-1998 FMP term for the former Abitibi Sioux Lookout Management Unit. This group of planning terms is called "Term A" in the tables and discussion. Likewise a similar grouping consistent with FMP planning terms was done for the second term that include the 1997-2001 FMP term for the "old" Lac Seul Forest, the 1996-2001 term for the former Sioux Lookout Crown Management Unit and the 1998-2001 term for the Abitibi Management Unit. This is described as "Term B" in the following tables and discussion. The third planning term, described as "Term C" describes post-amalgamation planning and accomplishments that occurred during the 2001-2006 planning term for the Lac Seul Forest. "Term D" describes planned activity on the Lac Seul Forest for the 2006-2011 planning term. The following table shows the grouping of management units and planning terms that were done to facilitate the completion of the trends analysis.

Management Unit	Trends Analysis Term
SLCMU 1991-1996 Abitibi MU 1993-1998 Lac Seul Forest 1992-1997	Term A
SLCMU 1996-2001 Abitibi MU 1998-2001 Lac Seul Forest 1997-2001	Term B
Lac Seul Forest 2001-2006	Term C
Lac Seul Forest 2006-2011	Term D

In preparation for the amalgamation of the former Lac Seul Forest, the former SLCMU and the former Abitibi MU, the MNR and the Company agreed to the following strategy in 1998;

1. Maintain the 5-year planning cycle for the former SLCMU (i.e 1996-2001) for the post amalgamation Lac Seul Forest. All future FMP's for the amalgamated Management Units would be brought onto the former SLCMU's planning cycle.
2. Shorten the 5 year planning cycle by one year for the 1997-2002 planning term for the Lac Seul so that the FMP for the Lac Seul forest was renewed in 2001 to make the Lac Seul planning cycle consistent with the planning cycle for the former SLCMU.
3. Complete activities for the 1993-98 planning term on the Abitibi MU. No activities would be planned or implemented for the 1998-2001 term on the

former Abitibi MU. Forest Management planning activities would recommence in 2001 on the former Abitibi MU under the approved 2001-06 FMP for the newly amalgamated Lac Seul Forest.

This amalgamation strategy affected planned and actual levels of harvest and renewal activities especially because there were no planned or implemented activities on the former Abitibi Management Unit during 1998-2001 or Term B. This caused a spike in planning and actual activities as illustrated by the tables and graphs between Terms B and C. Actual implementation of activities was also affected by the early renewal of the Lac Seul FMP in 2001. The early renewal meant that there were 4 years of actual activities compared with 5 years of planned levels for Term B (1997-2002 term) of the Lac Seul FMP term).

Table 1

The total land base shown in Table 1 varies between planning terms. Table 1 shows a decline in land base between Term A and Term C. The decline is caused by the following factors:

1. The former Abitibi MU included parcels 1 and 2 for the 1993-98 period (Terms A and B). The Lac Seul Forest includes only Parcel 1 of the former Abitibi Management Unit for the Term C. Parcel 1 was amalgamated into the Sioux Lookout Forest in 1998 and Parcel 2 was amalgamated into the English River Forest.
2. The FMPs for terms C and D were prepared under the FMPM (1996) manual and required Crown lands to be separated by managed and unmanaged. The FMP's for terms A and B terms were prepared under the TMPM (1986) that did not require lands to be broken down by managed and unmanaged. The land base for terms A and B include managed and unmanaged crown lands where as the land base for terms C and D includes only crown managed lands.
3. Removal of 6,403 hectares for the creation of Slate Falls First Nation reserve from the inventories for 1997-02 (Term B), and 2001-06 (Term C) Lac Seul FMP terms.
4. Removals from the inventory for the 2001-06 for MNR's Ontario's Living Legacy (OLL):
    - Removal of Whitemud Conservation area from the managed Lac Seul Land Base
    - Removal of Gull-Christina Conservation Reserve from the managed Lac Seul Land Base
    - Removal of Lac Seul Islands Reserve from the managed Lac Seul Land Base
    - Removal of a small portion of the St. Raphael Signature from the managed Lac Seul Land Base

5. Changes and updates to inventories contributed to some differences in the land base over the planning terms analyzed. There was a transition from paper inventories to spatial inventories between the earliest term analyzed and the 2001-06 planning term. The 1992-1997 Lac Seul FMP, the 1991-1996 SLCMU FMP and the 1993-1998 Abitibi FMP were all prepared using paper inventories. The 1997-2002 Lac Seul FMP utilized a spatial inventory for management planning and the 1996-2001 Sioux Lookout Crown Management Unit was prepared using a paper inventory. The 2001-2006 planning term for the Lac Seul Forest was prepared using a spatial inventory for all parts of the forest including the former Sioux Lookout Crown Management Unit and the former Abitibi Sioux Lookout Management Unit. There were differences created during the transition to a spatial inventory.

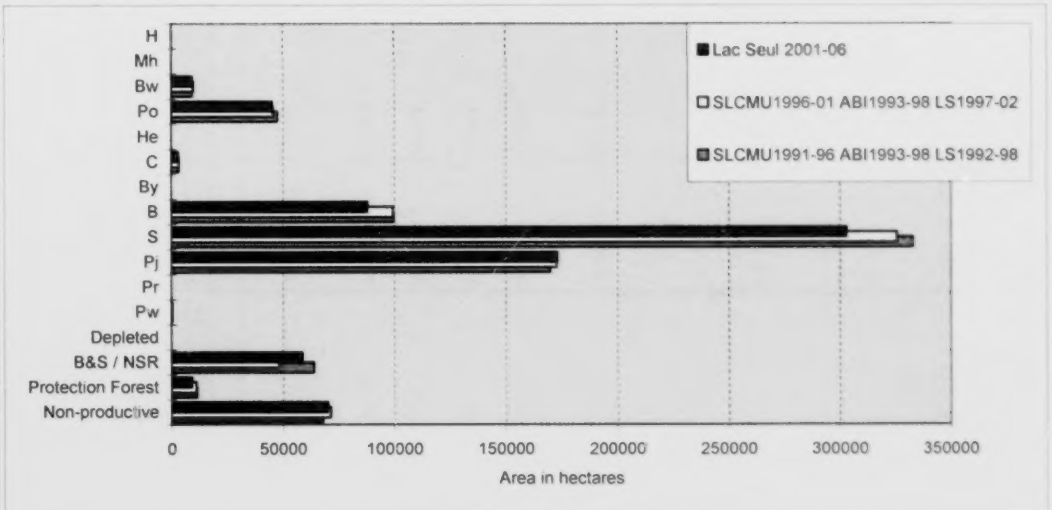
Table 1 - Summary of Total Area Under Management

Past and Current Plans - Crown Managed

MU: **Lac Seul Forest**

		Area in hectares		
		Past Plans		Current
Land Type	Plan Term	SLCMU 1991-96 Abitibi MU1993-98 Lac Seul 1992-97	SLCMU 1996-01 Abitibi MU1993-98* Lac Seul 1997-01	Lac Seul 2001-06
Non-Forested		3,352	3,738	3,166
Other Land				-
Forested				
Non-productive		67,859	71,278	69,991
Productive				
Protection		11,243	11,082	9,132
Production Forest				
B&S / NSR		63,820	48,199	58,610
Depleted				-
Forest Stands by Working Group				
Pw		43	49	25
Pr		313	291	322
Pj		169,798	172,729	173,063
S		332,847	325,730	304,831
Bf		99,735	99,524	87,866
By				-
Ce		3,297	3,334	3,012
La		122	193	253
He				-
Po		47,473	45,587	45,175
Bw		9,462	9,733	9,184
Ab		94	97	98
Mh				-
H				-
Total Production Forest		727,004	705,466	682,439
Total Forested Land		806,106	787,826	761,562

*No FMP prepared for the 1998-2001 term, therefore 1993-1998 data substituted.



Source: FMPM Table FMP-1, FMP-2, TMPM Table 4.8.2

Table 2 – Description of Forest Units

Forest Units for all Management Units analyzed were developed based on working groups and site class. Ecosite typing was not available to define forest units for planning terms A, B and C. Ecosite typing is currently available with the completion of the planning inventory used to prepare the 2006-2026 (Term D) FMP. The description of forest units varied between the three management units analyzed.

The Abitibi MU used working group only, to form forest units. The SLCMU and Lac Seul Forest used a combination of working groups and site types to create forest units. Site class was used for both the SLCMU and the Lac Seul Forest to separate more productive sites from less productive sites for the jack pine and spruce forest units. The poorer site classes for jack pine are represented by very dry or shallow or rockier sites and the poorer site classes for spruce are represented by the wetter or shallower sites. The SLCMU had a third classification for spruce and pine that included forest stands deemed to be inoperable because of rockiness, low stocking or high balsam fir content.

The SLCMU also includes a classification for Reserve Island (a large island in Lac Seul that is partially subdivided by Lac Seul First Nation Reserve and crown land).

The 2001-06 Lac Seul Forest FMP forest units were drafted from the Northwestern Regional MNR standard forest units with variation to account for local conditions. As a result of using standard forest unit, the 2001-2021 Lac Seul FMP introduced mixwood forest units while earlier plans, for all management units dealt strictly with hardwood and softwood forest units. The 2001-2021 forest units were designed to reflect a range of habitats, site types, and operating conditions.

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Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)
1991-1996 Sioux Lookout Crown Management Unit

Forest Unit		Forest	Main	Site	Silvicultural	FRI Parameters	Additional
Code	Name	Type	orking Gro	Type(s)	System	& Criteria	Information
Pj 1	Jack Pine 1	Conifer	Pj	N/A	Clearcut	WG and Site Class X, 1 and 2	
Pj 2	Jack Pine 2	Conifer	Pj	N/A	Clearcut	WG and Site Class 3 and PFR	
Pj 3	Jack Pine 3	Conifer	Pj	N/A	Clearcut	Inoperable	
Sp 1	Spruce 1	Conifer	S	N/A	Clearcut	WG and Site Class X, 1 and 2	
Sp 2	Spruce 2	Conifer	S	N/A	Clearcut	WG and Site Class 3 and PFR	
Sp 3	Spruce 3	Conifer	S	N/A	Clearcut	Inoperable	
Bf 1	Balsam 1	Conifer	Bf	N/A	Clearcut	WG and all site classes	
Po 1	Poplar 1	Hardwood	Po	N/A	Clearcut	WG and Site Class X, 1 and 2	
Po 2	Poplar 2	Hardwood	Po	N/A	Clearcut	WG and Site Class 3 and PFR	
Reserve Island	Reserve Island	Conifer/Hardwood	All	N/A	Clearcut	WG and all site classes	

** Pr, Bw, Oc and Oh, were not classified into Forest Units because of the small amount of area comprising these FU's

Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)
1993-1998 Abitibi Sioux Lookout Management Unit

Forest Unit		Forest	Main	Site	Silvicultural	FRI Parameters	Additional
Code	Name	Type	Working Group	Type(s)	System	& Criteria	Information
Spruce	Spruce	Conifer	Spruce	N/A	clearcut	All site classes	
Balsam	Balsam	Conifer	Balsam	N/A	clearcut	All site classes	
Jackpine	Jackpine	Conifer	Jackpine	N/A	clearcut	All site classes	
Hardwood	Hardwood	Hardwood	Poplar/White Birch	N/A	clearcut	All site classes	

Table 2 - DESCRIPTION OF FOREST UNITS

Lac Seul 1992-1997 FMP

FOREST UNIT	FOREST TYPE	MAIN WORKING GROUP	SITE TYPES	SILVICULTURAL SYSTEM
PJ1	This forest unit includes all of the area in the jackpine working group that is in the site class X, 1, 2 category. Production Forest Reserve (PFR) is excluded. It is intended that this will be one of the two primary jackpine forest units that will be managed on a sustained yield basis.	Jack Pine	Site Class X, 1, 2 - Regular Production Stands Only	Clear cut
PJ2	This forest unit includes all of the area in the jackpine working group that is in the site class 3 or PFR category. This is the other jackpine forest unit that will be managed on a sustained yield basis.	Jack Pine	All Pfr Stands and all Site Class 3	Clear cut
S1	This forest unit includes all of the spruce stands that are found in Site Class X and 1. This forest unit contains the highly productive spruce sites and will be managed on a sustained yield basis.	Black/White Spruce	Site Classes X or 1	Clear cut
S2	This forest unit includes all of the spruce stands that are found in site class 2 and 3. These are the less productive sites and will also be managed on a sustained yield basis.	Black Spruce	Site Classes 2 or 3	Clear cut
Bf	This forest unit will be managed with the objective of liquidating and converting to other species. The species occupies a number of highly productive upland sites and by depleting these areas and regenerating them to jackpine or spruce, the instance of spruce budworm infestation and volume losses will be reduced. Any losses in landbase in the prime forest units (pine, spruce) may be at least partially offset. Since balsam fir occupies the upland sites and has a component of spruce and pine it provides the flexibility to operate as a summer logging chance. The company will attempt to utilize this FU to balance seasonal harvest requirements. The high incidence of budworm damage combined with the operational difficulty for the mill created by the high moisture content of balsam fir specie means that SFMM harvest levels may be difficult to achieve.	Balsam Fir	All site classes	Clear cut
Oc	The larch, cedar, other conifer and red pine working groups have been combined to form a single forest unit. Given the extremely small size of this forest unit, it is impossible to manage it on a sustained yield basis. Pr has been include with Oc because it occupies a very small and insignificant area.	Red Pine, Larch, Cedar	All site classes	Clear cut
Oh	The poplar, white birch and ash stands have been combined to form a single forest unit. Poplar will become important as a commercial specie during the implementation of this FMP due to the construction of hardwood mills. White birch and ash are non commercial species. Black ash and white birch have been lumped with poplar because they occupy a very small and insignificant amount of area(.006% and 1.1% of the productive landbase respectively).		All site classes	Clear cut
LSS	All of the forest stands found within 120 meters of the shoreline of Lac Seul form the LSS forest unit. This area was determined in the Lac Seul Lake Management Plan and has a number of restrictions on timber management activities.	All Working Groups	All site classes	Reserve

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Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)
1996-2016 Sioux Lookout Crown Management Unit

Forest Unit		Forest	Main	Site	Silvicultural	FRI Parameters	Additiona
Code	Name	Type	orking Gro	Type(s)	System	& Criteria	Informatio
Pj 1	Jack Pine 1	Conifer	Pj	N/A	Clearcut	WG and Site Class X, 1 and 2	
Pj 2	Jack Pine 2	Conifer	Pj	N/A	Clearcut	WG and Site Class 3 and PFR	
Pj 3	Jack Pine 3	Conifer	Pj	N/A	Clearcut	Inoperable	
Sp 1	Spruce 1	Conifer	S	N/A	Clearcut	WG and Site Class X, 1 and 2	
Sp 2	Spruce 2	Conifer	S	N/A	Clearcut	WG and Site Class 3 and PFR	
Sp 3	Spruce 3	Conifer	S	N/A	Clearcut	Inoperable	
Bf 1	Balsam 1	Conifer	Bf	N/A	Clearcut	WG and Site Class X, 1 and 2	
Bf 2	Balsam 2	Conifer	Bf	N/A	Clearcut	WG and Site Class 3 and PFR	
Po 1	Poplar 1	Hardwood	Po	N/A	Clearcut	WG and Site Class X and 1	
Po 2	Poplar 2	Hardwood	Po	N/A	Clearcut	WG and Site Class 2, 3 and PFR	
Reserve Island	Reserve Island	Conifer/Hardwood	all	N/A	Clearcut	WG and all site classes	

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Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)

1997-2002 Lac Seul Forest FMP

Forest Unit Name	Forest Type	Main Working Group	Site Type(s)	Silvicultural System	FRI Parameters & Criteria	Additional Information
JACK PINE	Conifer	Jack Pine		Clearcut	Non-PFR SC=X,1,2	This forest unit includes all of the area in the jackpine working group that is in the site class X, 1, 2 category. Pr Reserve (PFR) is excluded. It is intended that this will be one of the two primary jackpine forest units that will be sustained yield basis.
JACK PINE	Conifer	Jack Pine		Clearcut	All PFR and SC=3	This forest unit includes all of the area in the jackpine working group that is in the site class 3 or PFR category. T jackpine forest unit that will be managed on a sustained yield basis.
SPRUCE	Conifer	Black Spruce/White Spruce		Clearcut	Sb+La+Ce<80%	This forest unit includes all of the spruce stands that have a specie composition where Sb+L+Ce is less than 80% contains upland productive spruce sites and will be managed on a sustained yield basis.
SPRUCE	Conifer	Black Spruce		Clearcut	Sb+La+Ce<80%	This forest unit includes all of the spruce stands that have a specie composition where Sb+L+Ce is 80% and greater less productive lowland sites and will also be managed on a sustained yield basis.
BALSAM FIR	Conifer	Balsam Fir		Clearcut	Balsam fir working group.	This forest unit will be managed with the objective of liquidating and converting to other species. The species occupi highly productive upland sites and by depleting these areas and regenerating them to jackpine or spruce, the inst budworm infestation and volume losses will be reduced. Any losses in landbase in the prime forest units (pine, spruce) partially offset. Since balsam fir occupies the upland sites and has a component of spruce and pine it provides the flexi as a summer logging chance. The company will attempt to utilize this FU to balance seasonal harvest requireme incidence of budworm damage combined with the operational difficulty for the mill created by the high moisture conte specie means that SFMM harvest levels may be difficult to achieve.
OTHER CONIFER	Mixed Wood	Larch/Cedar		Clearcut	Larch, Cedar and Red Pine working groups.	The larch, cedar, other conifer and red pine working groups have been combined to form a single forest unit. Given small size of this forest unit, it is impossible to manage it on a sustained yield basis. Pr has been include with Oc beca a very small and insignificant area.
OTHER HARDWOOD	Hardwood	Poplar/White Birch		Clearcut	Poplar, White birch and black ash working groups.	The poplar, white birch and ash stands have been combined to form a single forest unit. Poplar will become important a specie during the implementation of this FMP due to the construction of hardwood mills. White birch and ash are n species. Black ash and white birch have been lumped with poplar because they occupy a very small and insignifi area(006% and 1 1% of the productive landbase respectively)
LAC SEUL SHORELINE	All	All				All of the forest stands found within 120 meters of the shoreline of Lac Seul form the LSS forest unit. This area was de Lac Seul Lake Management Plan and has a number of restrictions on timber management activities.

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Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)

2001-2006 Lac Seul Forest FMP

Forest Unit		Forest	Main	Site	Silvicultural	FRI Parameters	Additional
Code	Name	Type	Working Group	Type(s)*	System	& Criteria	Information
Pw/Pt	White Pine/Red Pine	Conifer	Red Pine	Ecosites #11, 15, 18, 24	Clearcut	Pw + Pt >= 0.4	Stands with greater than or equal to 40% Red and White Pine. Working Group species may be either White Pine or Red Pine. Working Group species may be any species. Pw/Pt may contain inclusions of CoMx1, BfPur, CoMx2 or HwdMx >= 4 ha. * All Forest Units follow Drill Sort Order - Pw/Pt #1 Average Composition Pt7Pw1Pj2
OC	Other Conifer	Conifer	Other Conifer	Ecosites #11, 15, 17, 37	Clearcut	Ce + La >= 0.5 or (WG = Ce or WG = La)	Stands with Cedar or Larch working groups or having a combined Cedar and Larch composition which is greater than 50%. OC also may contain inclusions of SbLow >= 4 ha. * All Forest Units follow Drill Sort Order - OC #2 Average Composition Ce7Sb1Bf1L1
SbLow	Spruce Lowland	Conifer	Spruce Black	Ecosites #12, 13,	Clearcut	Sb + Ce + La = 1.0	Stands with a composition consisting of Black Spruce, Cedar and Larch. * All Forest Units follow Drill Sort Order - SbLow #3 Average Composition Sb10
SbUp	Spruce Upland	Conifer	Spruce All	Ecosites #12, 13, 14, 20, 21, 22, 25, 26, 27, 31, 32, 35, 36	Clearcut	Sb + Sw >= 0.7 and Po + Bw <= 0.2	Stands with a combined Black and White Spruce composition greater or equal to 70% with a combined Poplar and White Birch composition less than or equal to 20%. Working Group species may be either Black Spruce or White Spruce. SbLow also may contain incl * All Forest Units follow Drill Sort Order - SbUpl #4 Average Composition Sb7Pj1Bf1Po1
Pj Pur	Jack Pine Pure	Conifer	Jack Pine	Ecosites #12, 13, 14, 20, 21, 22, 25, 26, 31	Clearcut	Pj >= 0.7 and Po + Bw <= 0.2	Stands with greater or equal to 70% Jack Pine and Less than or equal to 20% Poplar and White Birch. * All Forest Units follow Drill sort order - PjPur # 5 Average Composition Pj9Sb1

* Ecosites were estimated because ecosite was not available in the FRI

Table 2 - DESCRIPTION OF FOREST UNITS (FMP-8)

2001-2006 Lac Seul Forest FMP

Forest Unit		Forest	Main	Site	Silvicultural	FRI Parameters	Additional
Code	Name	Type	Working Group	Type(s)*	System	& Criteria	Information
PoPur	Poplar Pure	Mixed Wood	Poplar	Ecosites #12, 16, 19, 23, 28, 29, 30, 33, 37	Clearcut	Po >= 0 7	Stands with greater than or equal to 70% Poplar PoPur also may contain inclusions of SbLow, SbUpl, PjPur or CoMx1 >= 4 ha *All Forest Units follow Drill Sort Order - PoPur #6 Average Composition Po9Sb1
CoMx1	Conifer Mixedwood 1	Conifer	Spruce Black	Ecosites #12, 13, 14, 19, 20, 21, 22, 25, 26, 27, 28, 29 31	Clearcut	Sb + Pj + Pw + Pr >= 0 7 and Po + Bw <= 0 2	Stands with a Black Spruce, Jack Pine, White and Red Pine composition greater or equal to 70%, and a Poplar and White Birch composition which is less than or equal to 20% Working Group species may be either Black Spruce or Jack Pine CoMx1 also may contain inclusion of SbLow>=4 ha * All Forest Units follow Drill Sort Order = CoMx1 #7 Average Composition Pj5Sb4Po1
BfPur	Balsam Fir Pure	Conifer	Balsam Fir	Ecosites #12, 14, 15, 17, 18, 20, 21, 22, 24, 26, 27, 29, 31, 32, 36	Clearcut	Bf >= 0 4 and Bf + Sb + Sw + Pj >= 0 6	Stands with greater than or equal to 40% Balsam Fir and a Balsam Fir, Jack Pine, Black and White Spruce composition greater than or equal to 60% BfPur also may contain inclusions of SbLow >= 4 ha * All Forest Units follow Drill Sort Order - BfPur #8 Average Composition B7Sw1Bw1Sb1
CoMx2	Conifer Mixedwood 2	Mixed Wood	Spruce All	Ecosites #12, 13, 14, 16, 19, 20, 21, 22, 23, 25, 26, 27, 31, 32, 35	Clearcut	Sb + Sw + Pj + Pw + Pr + Bf + Ce + La >= 0 5	Stands with greater than or equal to 50% composition of Black Spruce, White Spruce, Jack Pine, Red Pine, White Pine, Balsam Fir, Cedar and Larch Working Group species may be Balsam fir or Jack Pine, as well as Spruce CoMx2 also may contain inclusions SbLow, SpUp, PjPur or CoMx1>= 4 ha * All Forest Units follow Drill Sort Order CoMx2 #9 Average Composition Sb3Po2Pj2Bw1Sw1B1
Hwdmx	Hardwood Mix	Mixed Wood	Poplar	Ecosites #16, 19, 23, 28, 29, 30, 33, 38	Clearcut	Po + Bw >= 0 5	Stands with greater than or equal to 50% Poplar and White Birch composition Working Group species may be any of Poplar, White Birch or Black Ash HwdMx also may contain inclusions of SbLow, SbUp1, PjPur or CoMx1 >= 4 ha * All Forest Units follow Drill Sort Order - HwdMx #10 Average Composition Po4Bw3Sb1Pj1B1

* Ecosites were estimated because ecosite was not available in the FRI

Source FMP-8

Table 3- Summary of Actual & Planned Harvest Volumes

Actual harvest volume levels varied between 73% and 81% of planned levels across the three planning terms analyzed. The levels of salvage harvest and the harvesting of planned allocations achieved 81% of planned levels for the 2001-2006 planning term.

The following factors contributed to actual volumes falling below planned volumes for the 2001-06 planning term:

Fire 48 halted operations for 2 months during 2003 contributing to actual harvest falling below planned levels. The salvage of Fire 48 (approximately 30,000 ha) damaged areas forced the majority of the Company's harvesting operations and road building operations to be redirected from normal planned harvest areas to salvage areas for the years 2003 and 2004. Salvage operations continued through 2005 and 2006 and are planned to continue in the 2006-2011 FMP planning term. The harvested salvage volume was counted as actual volume in Table 3; however salvage operations resulted in lower volumes than would have been recovered from normal planned operations given the same time frame and effort. This lower productivity occurred because much of the salvage area had no roads and required major road construction to allow harvesting operations to occur. More roads were required per harvested cubic meter because volume per hectare tended to be lower in the salvage areas. The lack of access also created inefficiencies in the harvesting operations. Much of the burn area salvage contained degraded balsam fir and hardwood stands with scattered remnants of small spruce/fir understory and this reduced productivity and reduced volume harvested. The salvage operations contributed to jack pine and red pine exceeding planned levels and spruce falling below planned levels.

Operating constraints prevented the harvesting of all available harvest areas resulting in bypass and lower than planned volumes harvested.

Full utilization of some species was difficult especially in the earlier planning terms. Larch, poplar, and white birch were underutilized in previous planning terms because of limited markets. The following strategies have been employed to improve utilization of all previously under-utilized species. During 2001-06 planning term, the company has developed markets for larch, poplar, and white birch on the Lac Seul Forest and anticipates that all volumes of these species will be used in future planning terms. A merchandizing deck has been established at the McKenzie Mill site to process poplar and white birch where hardwood tree length is turned into sawlogs and/or chipped. Sawlogs are sent to Buchanan

Northern Hardwood mill in Thunder Bay or chipped and sold to the pulp and paper sector. Bush chipping has recently commenced on the Lac Seul Forest in 2003 to produce softwood and hardwood chips from otherwise unmarketable species and/or diameter sizes. Larch is now processed through the Hudson Sawmill as lumber and chips. The recent implementation of these strategies has contributed to actual harvest volumes approaching planned levels. Cedar and black ash make up a very small component of volumes available on the Lac Seul Forest and will be used where appropriate to meet or exceed requirements for wildlife habitat and Natural Disturbance Pattern Emulation guidelines. Currently there is no market for these species. The actual harvest levels are expected to continue to approach planned levels in future planning terms. However, recent mill closures in Northwestern Ontario may cause temporary setbacks in the full utilization of planned volumes because some of the mills that recently closed consumed residual products mainly in the form of chips from operations on the Lac Seul Forest.

The planned harvest volumes for the 2006-2011 (Term D) show planned harvest levels declining toward current actual harvest volumes. Harvest in past plans was accelerated to harvest over mature stands before they declined further and became non-operational. The continuation of accelerated harvesting would bring on a pending age class gap earlier, therefore allowable harvest levels have been reduced for future terms.

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Table 3 - Summary of Planned & Actual Harvest Volumes

MU: LAC SEUL

Average Planned Annual Harvest Volumes

Volumes are Annualized for the indicated 5 year period

	Volume in '000's cubic metres			
	Past Plans		Current	Future
Species	SLCMU 1991-96 Abitibi MU1993-98 Lac Seul 1992-97	SLCMU 1996-01 Abitibi MU1998-01*** Lac Seul 1997-01	Lac Seul 2001-06	Lac Seul 2006-11
PJ	169,405	146,609	234,630.0	197,995.2
PW				110.4
PR	990	402	637.6	401.6
SB	250,135	223,992	543,489.2	401,774.4
BF	35,120	11,135	27,966.4	25,546.4
SW	5,174	39,987	10,135.2	14,292.0
PO	15,441	47,252	58,962.0	107,197.8
CE		-	1,482.2	2,286.0
LA	500	-	1,985.6	3,191.4
BW	3,982	2,000	16,086.6	47,414.4
AB	-	-	47.8	212.0
Total Planned Volumes	480,747.0	471,378.4	895,422.6	800,421.6

*** There were no planned operations from 1998-01 on the Abitibi Sioux Lookout Management Unit

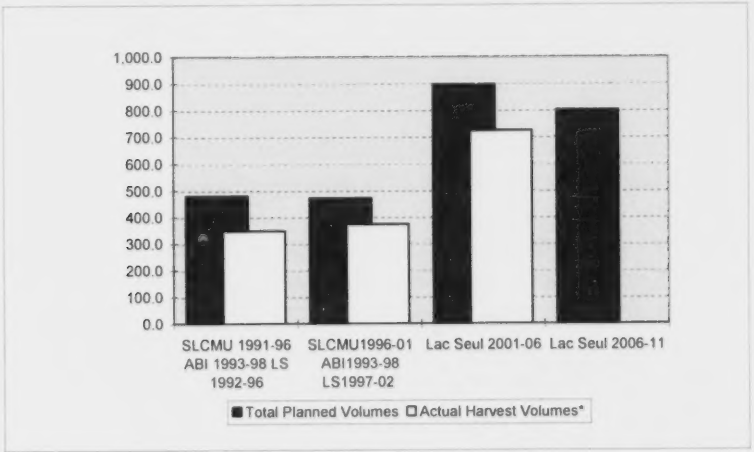
Actual Harvest Volumes

Volumes are Annualized for the indicated 5 year period

	Volume in '000's cubic metres		
	Past Plans		Current
Species	SLCMU 1991-96 Abitibi MU1993-98 Lac Seul 1992-97*	SLCMU 1996-01 Abitibi MU1998-01*** Lac Seul 1997-01	Lac Seul 2001-06
PJ	187,772.6	149,943.2	288,724
PR	797.2	476.3	958
PW			10
S	140,167.8	204,939.0	369,534
L & CE	153.6	1,223.0	2,555
BF	5,631.2	4,630.8	8,360
PO	11,639.6	9,180.4	50,653
BW	2,208.2	3,038.5	2,851
Total Actual Volumes	348,370.2	373,431.2	723,644

*Includes Salvage Volumes

*** There were no operations from 1998-01 on the Abitibi Sioux Lookout Management Unit



Source: Lac Seul TMP4.18.1(1992-97&1997-02), FMP21(2001-06),FMP21(2006-11) RPFO-4(1997-01), RPFO-4(1997-01), AR-3(2001-05), AR-4(2005)
Sioux Lookout CMU TMP Table19.1(1991-96&1996-01), RPFO-4(1991-96)
Abitibi Sioux Lookout MU TMP 4.17(1993-98)
Sioux Lookout Forest RPFO-4

Table 4 - Summary of Actual & Planned Harvest Area

Actual harvest area varied from 56% to 76% of planned area over the 3 planning terms analyzed. Actual levels were 76% for the 2001-06 planning term.

The following factors contributed to actual harvest area falling below planned area for the 2001-06 planning term:

> Fire 48 halted harvest operations for 2 months during 2003 contributing to lower than planned harvest levels. Fire 48 and subsequent salvage operations forced harvesting operations and road building operations to be redirected from normal planned harvest operations from 2003 to 2006. The productivity of harvesting operations in the salvage areas was lower because many of the stands were late-successional stands of degraded, low-stocked balsam fir and hardwood. Additional road construction was required for salvage because of a lack of access and because of the lower productivity of the burnt stands. More roads were required to harvest less ground because of the lower productivity.
>
> Operating constraints prevented the harvesting of all available harvest areas resulting in bypass and lower than planned volumes harvested.

Salvage operations caused actual harvest area to exceed planned forest operations for the PJ1, COMX2, HWDMX, BFPUR, and POPUR forest units for the 2001-06 term.

Full utilization of some species was difficult especially in the earlier planning terms because of limited markets. As discussed under Table 3 the company has recently employed strategies that increase the utilization of all species found on the Lac Seul Forest and reduce bypass levels. This will result in actual levels approaching planned levels of harvest area. Recent mill closures in Northwestern Ontario may cause temporary setbacks in the full utilization of planned volumes because some of the mills that recently closed consumed residual products mainly in the form of chips from operations on the Lac Seul Forest.

The planned harvest volumes for the future term show planned harvest levels declining toward current actual harvest area. Harvest in past plans was accelerated to harvest over mature stands before they declined further and became non-operational. The continuation of accelerated harvesting would bring on a pending age class gap earlier, therefore allowable harvest levels have been reduced for future terms.

Natural depletions from wildfire occurred in 1995, 1996 and 2003 on the Lac Seul Forest. Natural depletions from wildfire also occurred on the former Sioux Lookout Crown Management Unit in 1996. Salvage operations occurred in the 1996 and 2003 fire damaged area.

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Table 4 - Summary of Planned & Actual Depletion Area

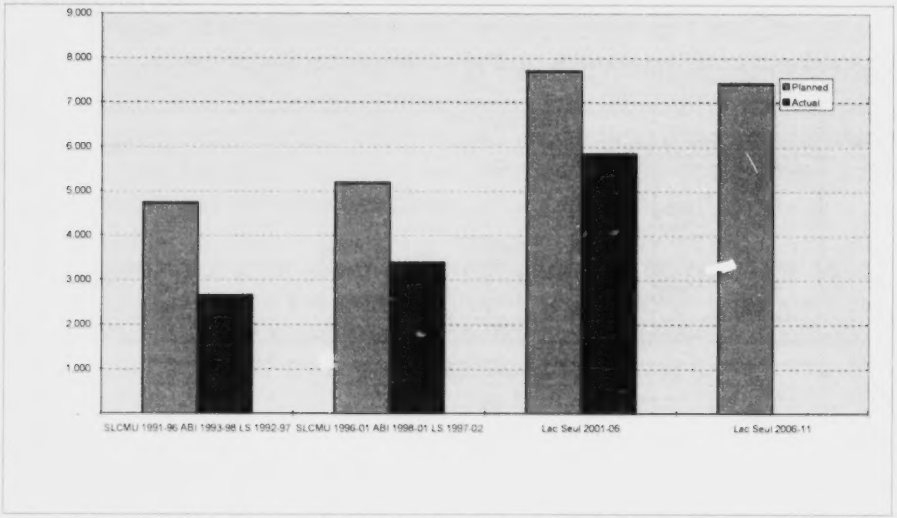
Past and Current Plans

Lac Seul Forest

Area is Annualized for the indicated 5 year period

	Planned Annual Harvest Area				Actual Depletion Area					
	Area in hectares				*Area in hectares*					
	Past Plans		Current	Future	Past Plans				Current	
Plan Term	SLCMU 1991-96 ABI 1993-98 LS 1992-97	SLCMU 1996-01 ABI 1998-01 LS 1997-02	Lac Seul 2001-06	Lac Seul 2006-11	SLCMU 1991-96 ABI1993-98 LS1992-97 Harvest*	SLCMU 1991-96 ABI1993-98 LS1992-97 Natural	SLCMU 1996-01 LS 1997-02*	SLCMU 1996-01 LS 1997-02	Lac Seul 2001-06*	Lac Seul 2001-06
Forest Unit					Harvest	Natural	Harvest	Natural	Harvest	Natural
PJPUR	-	-	833	694	-	-	-	-	886	399
PJ1	1,010	967	-	-	803	274	909	1	-	-
PJ2	549	346	-	-	405	539	115	-	-	-
Jack Pine	172	-	-	-	154	31	-	-	-	-
Pw/Pr	-	-	5	4	-	-	-	-	4	-
PR	3	6	-	-	4	-	1	-	-	-
SPUP	-	-	3,018	2,102	-	-	-	-	1,872	1,374
SBLOW	-	-	1,662	1,100	-	-	-	-	794	659
S1	1,475	1,261	-	-	712	1,234	1,110	1	-	-
S2	426	1,210	-	-	158	346	440	0	-	-
Spruce	422	-	-	-	17	17	-	-	-	-
BFPUR	457	974	311	70	189	15	597	9	436	2,187
BFMX				900					906	
CoMx1	-	-	1,202	996	-	-	-	-	775	583
CoMx2	-	-	638	432	-	-	-	-	3	1,546
OC	13	22	20	9	1	2	6	2	-	18
OH	184	203	-	-	119	268	156	-	-	-
HwdMx	-	-	14	886	-	-	-	-	100	159
PoPur	-	-	8	236	-	-	-	-	47	124
Po	16	180	-	-	63	-	-	-	-	-
Bw	7	16	-	-	8	-	-	-	-	-
Hardwood	-	-	-	-	-	-	-	-	-	-
Unproductive				-	9	279	51	-	39	-
Total Area	4,735	5,185	7,710	7,429	2,643	3,005	3,386	13	5,843	7,048

*Includes salvage harvest of fire depletions



Source: Lac Seul TMP4 15(1992-97), FMP18(1997-02), FMP18(2001-06), RPFO-2(1997-01), RPFO-2(1997-01), AR-2(2001-03), AR-1(2004&2005)
Sioux Lookout CMU TMP Table18.1(1991-96), TMP Tables 18.1&18.2(1996-2001) RPFO-2(1991-96)
Abitibi Sioux Lookout MU TMP 4.17(1993-98)
Sioux Lookout Forest RPFO-2

Table 5 – Summary of Managed Productive Forest by Forest Unit and Forest Structure Summary

The intention of Table 5 is to demonstrate trends in the forest condition in terms of forest unit and age class over time. It's difficult to see changes in forest unit and age class with the informati available from past Forest Management Plans, annual reports, report of past forest operations and presented in Table 5. Each of the forest management plans had different strategies and forest units. The land base for each of the three terms changed because of the additions / removals for new parks, new first nation reserves and management unit amalgamations. The information over the four planning terms assessed is based on forest units that were different for each of the management units that were eventually amalgamated together to form the current Lac Seul Forest for the 2001-06 planning term.

The following tables are provided to show a relation between the Forest Units used for the 2001 FMP and the forest units for the previous terms by former management unit. These relational tables were created from the planning inventory used to prepare the 2001 Lac Seul FMP. The tables demonstrate the differences between the forest units for the current 2001-2006 FMP planning term and the forest units that were used for the previous terms for each of the former management units that make up the current Lac Seul Forest.

SLCMU	Forest Units 2001 - Area(ha)									
Forest Units 1996 FMP	BfPur	CoMx1	CoMx2	HwdMx	PjPur	PoPur	Pw_Pr	SbLow	SpUp	Total
BF1	40403		2751	59						43213
BF2	1695									1695
PJ1		3397	2211		8305		55			13968
PJ2		2972	533		6777					10282
PO1			1578	5288		5372	24			12262
PO2			688	388		1488				2564
S1	1406	2469	13118					5708	15896	38596
S2	35	612	1920		0			139	4115	6821
Total	43540	9451	22798	5734	15082	6861	79	5846	20010	129402

SLCMU	Forest Units 2001 - Area(ha)									
Forest Units 1991 FMP	BfPur	CoMx1	CoMx2	HwdMx	PjPur	PoPur	Pw_Pr	SbLow	SpUp	Total
BF1	42099		2751	59						44909
PJ1		3397	2211		8305		55			13968
PJ2		2972	533		6777					10282
PO1			1578	5288		5372	24			12262
PO2			688	388		1488				2564
S1	1406	2469	13118					5708	15896	38596
S2	35	612	1920		0			139	4115	6821
Total	43540	9451	22798	5734	15082	6861	79	5846	20010	129402

Abitibi-Parcel 1	Forest Units 2001 - Area(ha)										
Forest Units 1993 FMP	BfPur	CoMx1	CoMx2	HwdMx	Oc	PjPur	PoPur	Pw_Pr	SbLow	SpUp	Total
Balsam Fir	6132		57								6189
Hardwood			826	1899			521				3246
Other Conifer					580						580
Pine	10	2611	1291			9490		23			13426
Spruce	528	2272	8318	4					7299	9832	28253
Total	6670	4883	10492	1903	580	9490	521	23	7299	9832	51695

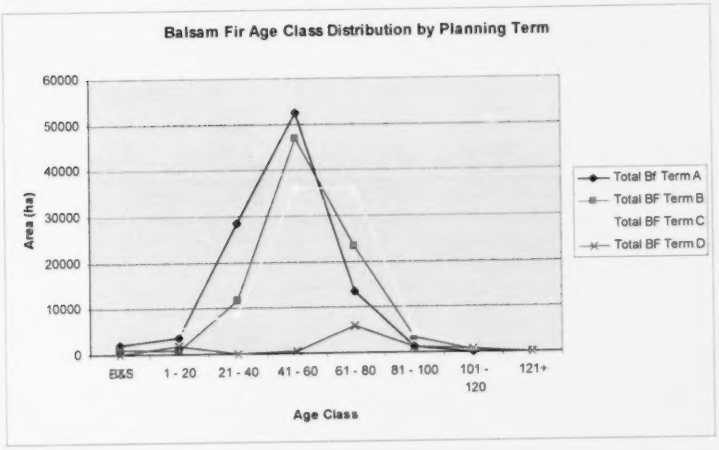
Lac Seul Forest	Forest Units 2001 - Area(ha)										
Forest Units 1997	BfPur	CoMx1	CoMx2	HwdMx	Oc	PjPur	PoPur	Pw_Pr	SbLow	SpUp	Total
BF	45228		1432								46660
OC					1548			55			1603
OH	52		8002	16128			12244		0		36426
PJ1		20804	11104	11		56553	36	37	59		88604
PJ2		16060	6941			44263					67264
S1	4016	29322	33635	209		75				34737	101995
S2		20	333						93067	76386	169806
Total	49296	66206	61447	16348	1548	100891	12280	92	93127	111124	512358

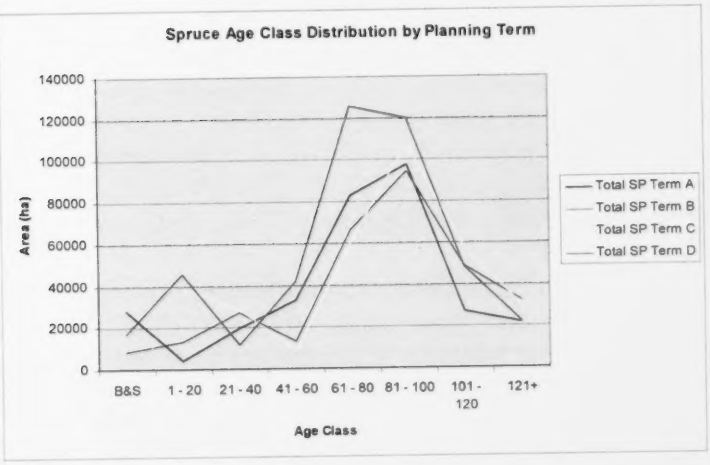
Lac Seul Forest	Forest Units 2001 - Area(ha)										
Forest Units 1992	BfPur	CoMx1	CoMx2	HwdMx	Oc	PjPur	PoPur	Pw_Pr	SbLow	SpUp	Total
BF	45228		1432								46660
OC					1548			55			1603
OH	52		8002	16128			12244		0		36426
PJ1		20804	11104	11		56553	36	37	59		88604
PJ2		16060	6941			44263					67264
S1	3406	23075	29498	209		74			50779	78883	185924
S2	610	6267	4470			1			42288	32241	85877
	49296	66206	61447	16348	1548	100891	12280	92	93127	111124	512358

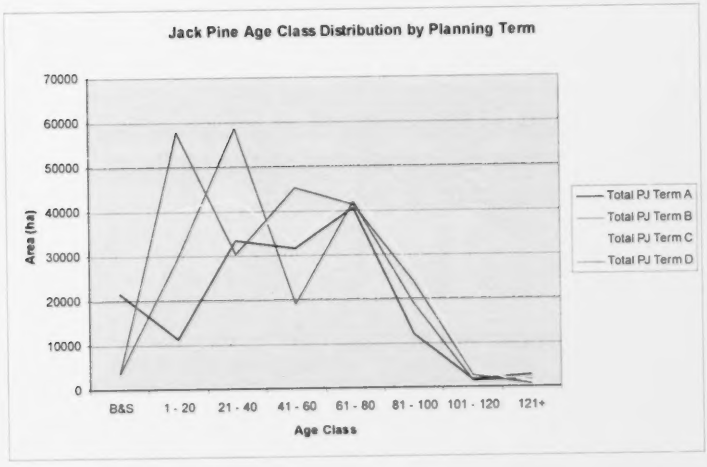
The forest units for the former SLCMU and Lac Seul Forest for Terms A and B had very similar forest unit structures but slightly different criteria for the generating the forest units. Modifications were made to the S1 and S2 criteria between Term A and Term B for the former Lac Seul Forest. The Balsam Fir forest unit had modifications done between the Term A and Term B on the former SLCMU. The Abitibi MU used working groups as forest units. Refer back to Table 2 and the associated discussion for a list of criteria and queries used for each of the forest unit for each management unit and planning term.

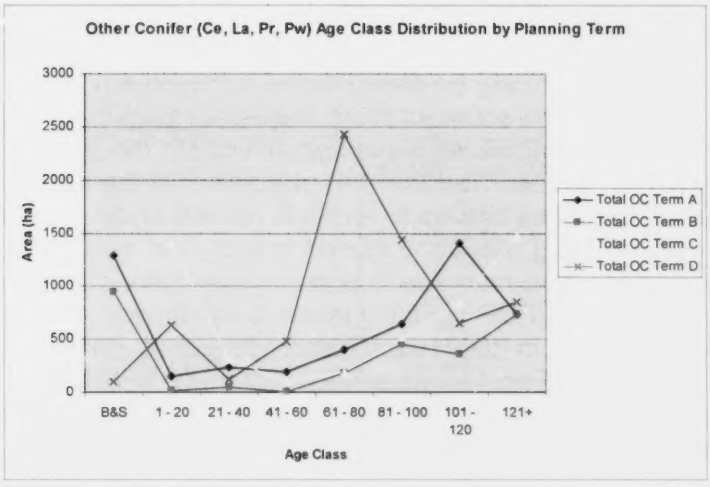
The forest units for Term C and Term D were modified to align them with the Northwestern MNR's standard forest units. The 2001-2006 forest units included mixwood forest units for the first time and focused on separating upland and lowland spruce based on species composition instead of site class because of inaccuracies in the FRI with site class.

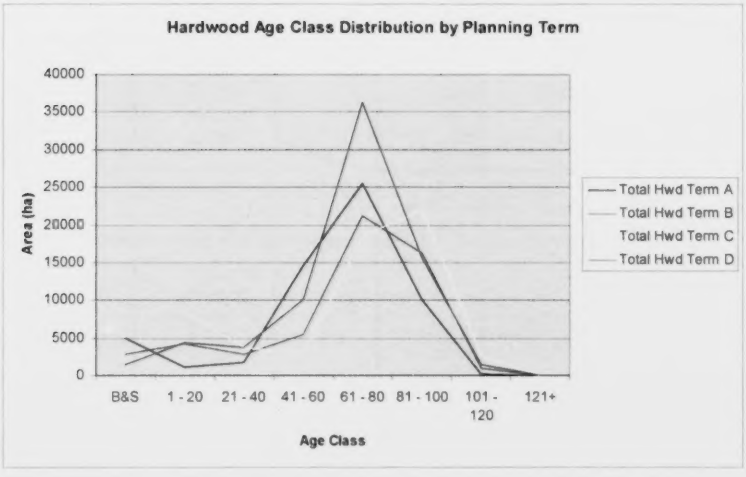
A more meaningful comparison and trends analysis can be done based on working group because the working groups are common to all planning terms whereas forest units are different for the former management units that currently make up the Lac Seul Forest and the different planning terms. The following charts show working groups by age class for the 3 terms being analyzed. A description of the time frames by management unit for Term A, B and C is provided earlier in the Introduction to this report.


Balsam Fir Age Class Distribution by Planning Term
60000
50000
40000
30000
20000
10000
0
Area (ha)
B&S
1 - 20
21 - 40
41 - 60
61 - 80
81 - 100
101 - 120
121+
Age Class
Total Bf Term A
Total BF Term B
Total BF Term C
Total BF Term D


Spruce Age Class Distribution by Planning Term
140000
120000
100000
80000
60000
40000
20000
0
Area (ha)
B&S
1 - 20
21 - 40
41 - 60
61 - 80
81 - 100
101 - 120
121+
Age Class
Total SP Term A
Total SP Term B
Total SP Term C
Total SP Term D


Jack Pine Age Class Distribution by Planning Term
70000
60000
50000
40000
30000
20000
10000
0
Area (ha)
B&S
1 - 20
21 - 40
41 - 60
61 - 80
81 - 100
101 - 120
121+
Age Class
Total PJ Term A
Total PJ Term B
Total PJ Term C
Total PJ Term D





The charts show that age class structure for working groups were similar across the 3 planning terms for Spruce, Jack Pine and Hardwood working groups. The slight differences that do occur are the result of aging of the forest. The charts also show increases in the younger age class (1-20) as a result of area surveyed and declared as successfully regenerated, over the planning terms. There was a major shift of balsam fir working group, in Term D to low stocked spruce and hardwood working groups due to mortality caused by spruce budworm epidemic as demonstrated by the charts. The small amount of area in other conifer forest increased slightly by Term D and probably is a result of photo interpretation methodology to produce the new FRI for Term D.

Observations have shown that balsam fir is re-establishing itself where the balsam fir mortality has occurred. The FRI typing for the 2006 planning inventory does not reflect the re-establishment of balsam fir because the balsam fir is at a juvenile stage below the upper canopy of forest stands. It is expected that future inventories (15-20 years) will demonstrate a significant increase in balsam fir on

the Lac Seul Forest. The balsam fir forest unit on the Lac Seul Forest occupies more area than would normally be encountered in the Boreal Forest primarily due to fire suppression near the southern more settled areas of the Forest and historic (pre-1970) forest practices implemented without the application of modern renewal techniques. Current FMP objectives for the Lac Seul Forest include strategies to reduce balsam fir levels to normal levels expected in the boreal forest by converting balsam fir stands to jack pine, spruce and mixwood forest units over time. However, due to economic limitations this strategy is long term and will take several FMP planning terms to implement. Many of the areas burnt in Fire 48 (occurred in 2003) were balsam fir stands. Most of the productive ground within Fire 48 was aerial seeded with a jack pine/ black spruce mix to assist natural renewal efforts and increase the occurrence of natural boreal species in the burnt areas.

TABLE 5
Summary of Managed Productive Forest by Working Group And Age Class

MU: Sioux Lookout Crown Management Unit

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Pj	B&S	3372	3581
	FTG-20	4848	4089
	21-40	523	1546
	41-60	10318	3308
	61-80	4847	8645
	81-100	283	2704
	101-120	33	47
	121+	47	50
	Total	24271	23970

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Sp	B&S	8492	8651
	FTG-20	1183	407
	21-40	2563	957
	41-60	12031	4948
	61-80	16152	13597
	81-100	4208	12830
	101-120	817	2000
	121+	680	823
	Total	46126	44213

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Pw	B&S		
	FTG-20		
	21-40		6
	41-60		
	61-80		
	81-100	21	21
	101-120		
	121+		
	Total	21	27

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Pr	B&S	28	25
	FTG-20		12
	21-40	89	35
	41-60	16	
	61-80	67	53
	81-100	10	110
	101-120	52	
	121+		
	Total	262	235

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Bf	B&S	920	949
	FTG-20	1463	50
	21-40	16653	2138
	41-60	21069	28636
	61-80	3342	10166
	81-100	504	1983
	101-120		460
	121+		
	Total	43951	44382

TABLE 5
Summary of Managed Productive Forest by Working Group And Age Class

MU: Sioux Lookout Crown Management Unit

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Po	B&S	2241	2448
	FTG-20	606	65
	21-40	738	685
	41-60	6575	1232
	61-80	7231	6876
	81-100	688	5013
	101-120		195
	121+		
	Total	18079	16514

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Bw	B&S	370	370
	FTG-20	306	27
	21-40	450	343
	41-60	1353	580
	61-80	682	1147
	81-100	64	340
	101-120		36
	121+		
	Total	3225	2843

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Other Hardwood	B&S	36	36
	FTG-20		
	21-40		
	41-60	7	7
	61-80	7	
	81-100	33	16
	101-120	17	24
	121+		17
	Total	100	100

Working Group/Forest Unit	Age Class	Area by Planning Term 1991-1996	1996-2001
Other Conifer	B&S	918	918
	FTG-20		
	21-40	5	
	41-60	126	5
	61-80	284	126
	81-100	394	323
	101-120	377	360
	121+	362	734
	Total	2466	2466
	Grand Total	138501	134750

1986-1991 - Table 9
1991-1996 - Table 9.3 and Table 9.2
1996-2001 - Table 10

TABLE 5
Summary of Managed Productive Forest by Working Group And Age Class

MU: Abitibi Sioux Lookout Management Unit 1993-98 and 1998-01

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
Pj (Pine)	B&S	4277	na
	FTG-20	1233	na
	21-40	0	na
	41-60	977	na
	61-80	6440	na
	81-100	795	na
	101-120	42	na
	121+	74	na
	Total	13838	0

*No FMP prepared for the 1998-01 term

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
Spruce 1	B&S	6612	na
	FTG-20	0	na
	21-40	244	na
	41-60	4441	na
	61-80	13753	na
	81-100	8313	na
	101-120	2150	na
	121+	354	na
	Total	35867	0

*No FMP prepared for the 1998-01 term

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
Balsam	B&S	808	na
	FTG-20	0	na
	21-40	481	na
	41-60	8254	na
	61-80	1182	na
	81-100	0	na
	101-120	0	na
	121+	0	na
	Total	10725	0

*No FMP prepared for the 1998-01 term

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
Other Pw+Pr+Ce+L+C)	B&S	329	na
	FTG-20	0	na
	21-40	0	na
	41-60	20	na
	61-80	26	na
	81-100	31	na
	101-120	412	na
	121+	63	na
	Total	881	0

*No FMP prepared for the 1998-01 term

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
Unmerch Sb	B&S	0	na
	FTG-20	0	na
	21-40	0	na
	41-60	0	na
	61-80	67	na
	81-100	262	na
	101-120	130	na
	121+	245	na
	Total	704	0

*No FMP prepared for the 1998-01 term

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
Hardwood	B&S	391	na
	FTG-20	0	na
	21-40	0	na
	41-60	1259	na
	61-80	2688	na
	81-100	647	na
	101-120	25	na
	121+	0	na
	Total	5010	0

Working Group/Forest Unit	Age Class	Area by Planning Term 1993-1998	1998-2001*
All	B&S	12417	na
	FTG-20	1233	na
	21-40	725	na
	41-60	14951	na
	61-80	24156	na
	81-100	10048	na
	101-120	2759	na
	121+	736	na
	Total	67025	0

*No FMP prepared for the 1998-01 term

Source:
1985-1992 - Table TMP 4.9 - Spruces grouped and Bw and Po grouped
1992-1993 - Table TMP 4.13.1
1993-1998 - Table TMP 4.13.1

Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT
Lac Seul Forest 1992-97 and 1997-2002

Forest Unit	Age Class	1992-97 (ha)	1997-02 (ha)	Forest Unit	Age Class	1992-97 (ha)	1997-02 (ha)
Pj1	B&S - NSR	10491		S2	B&S - NSR	5033	
	1-20	4509	21379		1-20	52	6372
	21-40	14257	21451		21-40	11252	14391
	41-60	10135	7697		41-60	1832	2406
	61-80	17089	19176		61-80	5169	19054
	81-100	6005	10329		81-100	16104	49641
	101-120	1399	1357		101-120	12395	37636
	121+	2599	1555		121+	9489	27102
Forest Unit Subtotal		66484	82944	Forest Unit Subtotal		61326	156602
PJ2	B&S - NSR	3322		Bf	B&S - NSR	454	
	1-20	602	3694		1-20	2166	640
	21-40	18468	35483		21-40	11314	9583
	41-60	10028	8007		41-60	23274	18078
	61-80	12044	13939		61-80	9039	13218
	81-100	4929	5896		81-100	757	1402
	101-120	350	228		101-120	82	82
	121+	117	155		121+		
Forest Unit Subtotal		49860	67402	Forest Unit Subtotal		47086	43003
S1	B&S - NSR	8114		Oh	B&S - NSR	1968	
	1-20	3010	6731		1-20	216	4120
	21-40	5299	11448		21-40	571	1723
	41-60	14320	6051		41-60	5310	3557
	61-80	47711	33560		61-80	14829	13195
	81-100	68834	31857		81-100	8644	10796
	101-120	11347	9054		101-120	123	702
	121+	11010	4615		121+	59	50
Forest Unit Subtotal		169645	103316	Forest Unit Subtotal		31720	34143
OC	B&S - NSR	8			Total	427511	487410
	1-20	148					
	21-40	141					
	41-60	25					
	61-80	25					
	81-100	181					
	101-120	558					
	121+	304					
Forest Unit Subtotal		1390	0				

Source TMP 4.13.1

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Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9)

Lac Seul Forest 2001-06

		Protection Forest		Production Forest				
				Unavailable		Stage of	Available	
Forest Unit	Age Class	(ha)	(m^3)	(ha)	(m^3)	Management	(ha)	(m^3)
BfPur	Age 0- 20	0	0	689	0		4818.7	0
	Age 21- 40	0	0	955	24281		9153	224471
	Age 41- 60	314	19782	6881	417656		31291	1878604
	Age 61- 80	239	18099	7408	562598		30528	2316388
	Age 81-100	12	1020	1134	96041		4627	392034
	Age 101-120	0	0	155	13389		796	69140
	Age 121-140	0	0	1	69		50	3802
	Age 141-160	0	0	20	1254		36	2250
	Age 161-180						0	0
	Age 181-200						0	0
Forest Unit Subtotal		565	38901	17243	1115288	0	81300	4886689
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	(m^3)	Stage of Management	Available (ha)	(m^3)
CoMx1	Age 0- 20	0	0	258	0		6603	0
	Age 21- 40	52	2184	901	31524		12403	444705
	Age 41- 60	98	9506	214	17597		2597	209656
	Age 61- 80	20	2640	188	237232		23380	2947552
	Age 81-100	28	4096	2433	350591		20830	2998475
	Age 101-120	0	0	612	86973		5658	811118
	Age 121-140	25	2425	161	16727		1072	112384
	Age 141-160	0	0	51	4483		364	31812
	Age 161-180	0	0	0	0		0	0
	Age 181-200	0	0	1	92		59	5530
Forest Unit Subtotal		223	20851	6511	745219		72966	7561232
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	(m^3)	Stage of Management	Available (ha)	(m^3)
CoMx2	Age 0- 20	0	0	524	0		8308	0
	Age 21- 40	117	5148	1716	56268		11594	405528
	Age 41- 60	21	1554	932	83980		6314	551395
	Age 61- 80	77	10435	4154	566950		25461	3470643
	Age 81-100	100	15915	4496	714312		25126	3996852
	Age 101-120	0	0	1011	161274		5104	812328
	Age 121-140	7	875	151	16091		1047	106523
	Age 141-160	0	0	44	3088		261	18135
	Age 161-180	0	0	46	2990		107	6955
Forest Unit Subtotal		322	33927	13074	1604953		83322	9368359
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	(m^3)	Stage of Management	Available (ha)	(m^3)
HwdMx	Age 0- 20	17	0	134	0		878	0
	Age 21- 40	31	1333	308	11864		1427	51071
	Age 41- 60	23	2300	330	29976		1821	176948
	Age 61- 80	56	6936	1894	244458		8764	1133766
	Age 81-100	9	1260	1683	235620		8845	1238300
	Age 101-120	14	1890	166	22724		878	120228
	Age 121-140	0	0	11	997		8	720
	Age 141-160	0	0	0	0		0	0
	Age 161-180	0	0	7	231		25	825
	Age 181-200						0	0
Forest Unit Subtotal		150	13719	4533	545870		22646	2721858
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	(m^3)	Stage of Management	Available (ha)	(m^3)
Oc	Age 0- 20	5	0	193	0		1155	0
	Age 21- 40	0	0	40	33		264	167
	Age 41- 60	0	0	10	26		55	179
	Age 61- 80	0	0	48	1050		115	2609
	Age 81-100	52	1968	73	3361		368	15442
	Age 101-120	87	5344	99	6053		624	38153
	Age 121-140	31	1705	129	7467		868	49456
	Age 141-160	0	0	37	1998		258	13932
	Age 161-180	12	660	31	1674		98	5303
	Age 181-200	0	0	12	648		35	1890
Forest Unit Subtotal		187	9677	672	22310		3840	127131

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Table 5 - SUMMARY OF MANAGED PRODUCTIVE FOREST BY FOREST UNIT (FMP-9)

Lac Seul Forest 2001-06

		Protection Forest		Production Forest				
				Unavailable		Stage of	Available	
Forest Unit	Age Class	(ha)	(m^3)	(ha)	(m^3)	Management	(ha)	(m^3)
PjPur	Age 0- 20	71	0	982	0		41796	0
	Age 21- 40	34	646	2257	77498		25536	900541
	Age 41- 60	107	9029	1820	142140		25063	1921186
	Age 61- 80	296	34090	1826	216490		22825	2686955
	Age 81-100	36	4864	1372	185608		12168	1634000
	Age 101-120	0	0	223	30480		967	130882
	Age 121-140	0	0	4	318		139	11057
	Age 141-160	0	0	7	373		137	6989
	Age 161-180	0	0	18	630		99	3465
	Age 181-200	0	0	0	0		0	0
	Age201-220	0	0	0	0		0	0
Forest Unit Subtotal		544	48629	8509	653537		128730	7295075
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	Unavailable (m^3)	Stage of Management	Available (ha)	Available (m^3)
PoPur	Age 0- 20	0	0	384	0		7182	0
	Age 21- 40	0	0	99	5909		137	7278
	Age 41- 60	21	2667	76	7699		290	34195
	Age 61- 80	8	1208	531	86466		3540	574080
	Age 81-100	0	0	796	140096		6405	1127280
	Age 101-120	9	1008	100	16348		1030	164760
	Age 121-140	0	0	3	189		26	1638
	Age 141-160						0	0
	Age 161-180						0	0
Forest Unit Subtotal		38	4883	1989	256707		18610	1909231
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	Unavailable (m^3)	Stage of Management	Available (ha)	Available (m^3)
Pw Pr	Age 0- 20			9	4		208	94
	Age 21- 40			0	0		35	2275
	Age 41- 60			0	0		41	4223
	Age 61- 80			0	0		27	4581
	Age 81-100			9	1944		100	21480
	Age 101-120			6	1337		58	12887
	Age 121-140			0	0		8	1728
	Age 141-160			0	0		0	0
	Age 161-180			0	0		20	3740
Forest Unit Subtotal				24	3285		497	51008
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	Unavailable (m^3)	Stage of Management	Available (ha)	Available (m^3)
SbLow	Age 0- 20	125	0	1585	0		28780	0
	Age 21- 40	0	0	173	1035		2070	12717
	Age 41- 60	0	0	110	3292		936	27946
	Age 61- 80	40	2640	562	34452		4479	271950
	Age 81-100	512	44568	2127	182273		18199	1565041
	Age 101-120	2637	251330	3130	296300		25314	2396082
	Age 121-140	2125	195074	1096	100780		10479	961902
	Age 141-160	443	35233	581	44871		5500	423070
	Age 161-180	104	6240	146	8530		1311	75940
	Age 181-200	28	1204	11	458		58	2422
	Age 201-220						9	342
Forest Unit Subtotal		6014	536289	9521	671991		97135	5737412
		Protection Forest		Production Forest				
Forest Unit	Age Class	(ha)	(m^3)	Unavailable (ha)	Unavailable (m^3)	Stage of Management	Available (ha)	Available (m^3)
SpUp	Age 0- 20	1	0	818	0		15776	0
	Age 21- 40	4	132	1651	53363		14801	464773
	Age 41- 60	0	0	272	22742		3974	337724
	Age 61- 80	155	18910	2226	286142		23384	3012768
	Age 81-100	74	10212	5162	710430		47595	6551063
	Age 101-120	96	12112	2174	278456		18277	2339456
	Age 121-140	125	10468	754	68366		6295	567536
	Age 141-160	0	0	233	14119		1579	95067
	Age 161-180	0	0	12	552		74	3313
Forest Unit Subtotal		455	51834	13302	1434170		131755	13371700
Total All Forest Units		8498	758710	75378	7053330		640799.4	53029695

Source:
FMPM Table FMP-9

Table 6– Summary Report of Renewal, Tending and Protection

The 1992-97 and 2001-06 columns report five years of planned and actual levels for the Lac Seul Forest. The 1997-2002 Lac Seul FMP was renewed one year early and four years of actual activity is reported in Table 6 for the 1997-01 term whereas the FMP planned levels were forecasted for five years. To do a realistic comparison of planned vs. actual levels; planned levels for the 1997-02 term have been reduced to 4/5 of the original FMP forecasted levels in Table 6.

The achievement of actual vs. planned levels of renewal and maintenance treatments reflect the achievement of actual vs. harvest area in Table 4. A summary of Table 4 is presented below with Table 6 to demonstrate the fluctuations in actual harvest levels as compared to planned levels for each of the three planning terms analyzed. Actual harvest levels varied between 56% and 76% of planned levels. Actual renewal levels fell below planned levels because some of the area planned to be treated was not harvested. The completion of renewal work usually follows harvesting by 2 to3 years and forecasts more reflect the actual levels achieved from the previous period. In general, the forecast are quite good for the core renewal program activities of mechanical site preparation, planting, seeding, and tending. The declaration of area for "natural regeneration" was recognized as an issue in previous audits and was actively addressed in the 2001 term.

During the later portion of 1996 the company began training operators to conduct CLAAG operations on the forest. Upon further refinement of the low cost renewal technique, the company changed the process to "corridor selection method" as it still qualified as a clearcut given the stands harvested were even-aged. The purpose of the technique was to protect the receptive sphagnum seed bed where ever possible. Previous plans looked at declaring "natural" at the time FTG surveys were conducted, and during the 2001-06 planning term a concerted effort was made to declare "natural" upon completion of the tree plant. This was done to avoid costly data management issues associated with managing slivers. It was felt that to avoid confusion in tracking information that it would be best to declare "natural" once the true boundaries of the artificial renewal treatments were established. Actual natural treatments for the 2001-06 planning term fell below planned levels by 50% which is close to the 65% harvest level achieved in the previous period.

There is a continual increase in the amount of area planted in each planning term which indicates that the harvest in each plan period is shifting onto more competitive sites. Planting achieved 84% of what levels where planned which is greater than the portions harvested thus reinforcing that more competitive sites are being harvested. This is also supported by the trends in aerial application of herbicides. This trend is expected to continue as the company harvests in more competitive hardwood/softwood mixed stands.

As reported earlier, Fire 48 (approximately 30,000 ha.) resulted in operations shifting from planned allocations in the 2001-06 FMP to affected areas within Fire 48. A large portion of Fire 48 was aerial seeded with Forestry Futures assistance without the benefit of site preparation because much of the fire area had low duff levels due to the high intensity of the burn. It was felt that given the size and remoteness of much of the burnt area that it was impossible to get the manpower in time to accurately map the degree of duff reduction across the burn. It was recognized that given the historic state of the forest, greater gains would be made by seeding immediately following the fire with the simple objective of increasing the pine and spruce quantity in the burned areas to levels greater than prior to the burn. It was accepted that there be some portion of area that would be highly competitive whereby the poplar and birch suckering would overcome the seeded area. Assessments are being made during the 2006-11 period to determine what follow-up treatments may be required in the areas where salvage has occurred.

A strategic effort was made in the 2001-06 FMP to plan for lower cost renewal and implement lower cost treatments by applying site preparation for natural regeneration. A conservative prescription with seeding was favoured during field implementation because field staffs are still developing a comfort zone as to when exactly to treat sites with site preparation for natural regeneration. It is expected that levels will increase in the future as staff become more aware via effectiveness monitoring as to where seeding is not required. Mechanical site preparation levels were 53% of planned levels and this is primarily due to efforts by the company to move towards area-base planting without site preparation on thin duff sites. An allowance for chemical site preparation was planned to accommodate those sites where high competition exists due to advance vegetation on rich soils prior to planting or seeding. Staff doing annual spray prescriptions found that most sites could be planted with a follow-up aerial tending treatment instead, consequently only 11% of the planned chemical site preparation was achieved.

Reporting of "prescribed burn" as site preparation represents slash pile burning used to clear landings of debris and prepares the landing areas for renewal work. Historically slash pile burning was planned and reported at a "gross" level based on the area harvested and not as the "net" actual landing area actually cleared. Part way through the 2001-2006 planning term the Regional MNR directed planning teams to plan and report slash pile burning accomplished based on actual landing area burned instead of gross area harvested. As a result the slash pile burning numbers in Table 6 are based on a mix of gross and net area depending on the reporting year. The following table list gross and net hectares from the Slash Pile Burn Reports.

Year	Gross Area (ha)	Net Area (ha)
2,001	2,438	61
2,002	3,754	94
2,003	6,770	169
2,004	4,053	101
2,005	4,984	125
Total	**21,999**	**550**

Planned levels are presented at a gross level (32,497 ha). The actual gross area (21,999 ha) achieved from the Slash Pile Burn Reports is 68% of the planned levels. Given that slash pile burning mimics the area harvested, (68% divided by 76% = 89%), the majority of area harvested was piled and burned. Because the piling program is generally 1 year behind the cut, there are winter harvest areas that could not piled and burned due to ground conditions. Some areas were still in progress of being harvest and slash pile burning was deferred until harvesting in the area is completed.

Tending occurred at higher than planned levels for all planning terms. The higher than expected achievement of tending occurred because planned levels were based on the proportion of area that historically required tending given ground conditions. The trend supports the company's view that harvest activities are shifting away from lower competitive coarse textured soils to finer soils that are more competitive sites. In the past, finer textured soils having any significant amount of hardwood were avoided but with the improved market conditions for hardwood chips these sites are now being harvested. This trend is expected to continue with the exception that the Company intends to permit hardwoods on productive sites to regenerate to quality hardwood stands as opposed to applying herbicides. This is part of the Company's environmental strategy to reduce the amount of herbicide usage. Herbicide is a vital tool to achieving conifer dominated stands where hardwoods are "off-site" to achieve both forestry and wildlife objectives.

Allowances for 200 ha of manual and chemical ground tending were planned because some sites requiring release may not be suitable and/or operationally feasible for aerial chemical tending. Aerial chemical tending is the preferred treatment for cleaning because it requires fewer resources (manpower), is safer and more cost effective than ground techniques such as manual or chemical ground tending operations. Annual field inspections and the subsequent planning process conducted during the 2001-06 planning period did not reveal any sites that required ground techniques. Therefore all areas requiring tending were treated aerially for the 2001-06 term.

Pre-commercial Thinning was not conducted during the 2001-06 period. Fire 48 destroyed the older plantations that were targeted for thinning. Red pine plantations were scheduled in 2005/06 AWS for cleaning, however due to the lack of available contractors and early winter snow depths, these treatments could not be conducted. During the 2006/07 AWS budget constraints due to the softwood trade tariff meant only essential silviculture activities were conducted. The new 2006 FMP proposes thinning on 1250 ha to be completed in COMX1, COMX2 and PJPUR forest units for the 5-year period. The company will be looking to identify new areas for pre-commercial thinning in the 2006/07 period.

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Table 6 - SUMMARY REPORT OF RENEWAL, TENDING AND PROTECTION OPERATIONS (RPFO-7)

	Area Summary of all Forest Units (ha)					
	Past Plan Term		Past Plan Term		Current Plan Term	
	Planned	Actual	Planned	Actual	Planned	Actual
Renewal	1991-96 SLCMU 1993-98 Abitibi MU 1992-97 Lac Seul	1991-96 SLCMU 1993-98 Abitibi MU 1992-97 Lac Seul	1996-2001 SL 1997-2002 LS	1996-2001 SL 1997-2001 LS	2001-2006 LS	2001-2006 LS
Regeneration						
Uneven-Aged Management						
Selection Cut - Harvest						
Total Uneven-Aged Management						
Even-Aged Management						
Natural Regeneration						
Clearcut	2697	2697	2659	640	5497	2667
Strip Cut	80	0	3242	13		0
Seed Tree Cut	4594	441	1132	27	700	11
HARP/HARO/CLAAG	0	151	7033	681		
Subtotal Natural	7371	3288	14066	1361	6197	2678
Artificial Regeneration						
Planting	4413	6147	6546	5969	13274	11113
Seeding direct	5165	4476	1280	761	6248	28073
with site preparation	90	0	280	0		0
Scarification	0	1	0	0	500	21
Subtotal Artificial	9668	10624	8106	6730	20022	39208
Total Even-Aged Management	17039	13912	22172	8091	26219	41886
Total Regeneration	17039	13912	22172	8091	26219	41886
Site Preparation						
Mechanical	10315	9947	7072	6776	17847	9522
Chemical	622	361	400	167	1000	112
Prescribed Burn	603	0	382	0	32497	3520
Total Site Preparation	11540	10309	7854	6943	51344	13154
Tending						
Cleaning						
manual	920	60	242	215	200	0
chemical - ground	0	0	470	87	200	0
- aerial	2393	2861	2000	3852	7000	10844
mechanical	0	0	0	0		0
prescribed burn	0	0	0	0		0
Spacing, pre-commercial thinning, improvement cutting	0	0				0
even-aged	1698	34	440	291	300	0
uneven-aged	0	0	0	0		0
Cultivation	0	0	0	0		0
Total Tending	5011	2956	3152	4445	7700	10844
Protection (Insect Pest Control)						
accelerated harvest						
salvage						
manual protection						
ground insecticide						
aerial insecticide						
Total Protection						

Source: Lac Seul TMP 4.19 RPFO-7(1992-97), RPFO-7(1997-01), AR-6(2001-03), AR-7(2004), GIS Records (2005)

Sioux Lookout CMU TMP 22 RPFO-7(1991-96)

Abitibi Sioux Lookout MU TMP 4.4 RPFO-7(1993-98)

Sioux Lookout Forest RPFO-7(1997-01)

	Actual Harvest vs. Planned Levels sumarized from Table 4 - Area(ha)					
	Planned Harvest	Actual Harvest	Planned Harvest	Actual Harvest	Planned Harvest	Actual Harvest
	1991-96 SLCMU 1993-98 Abitibi MU 1992-97 Lac Seul	1991-96 SLCMU 1993-98 Abitibi MU 1992-97 Lac Seul	1996-2001 SL 1997-2002 LS	1996-2001 SL 1997-2001 LS	2001-2006 LS	2001-2006 LS
Area(ha)	4735	2643	5185	3386	7710	5843
% of Planned		56%		65%		76%

Table 7 - Harvested Area Successfully Regenerated

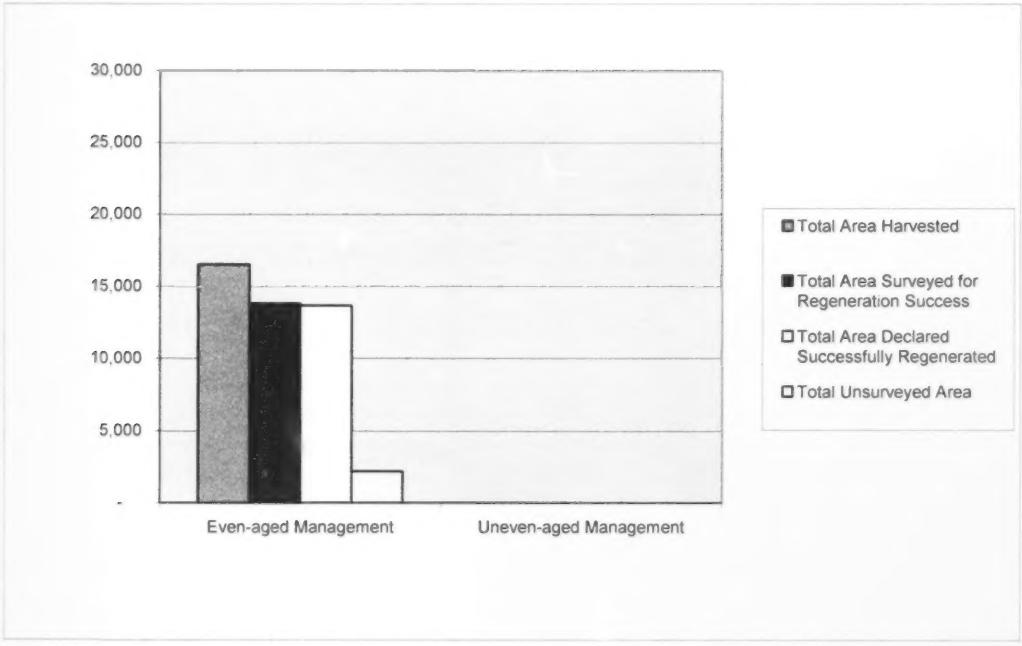
The intent of the table is to compare regeneration results with harvest area for a five years period where there has been enough time for the harvest area to have been successfully regenerated and assessed. In accordance with direction from the *Independent Forest Audit Process and Protocol*, February 2006 the trends analysis provides regeneration results for areas harvested from the Lac Seul forest during the 1991-1996 planning term. GIS records were mainly used to complete Table 7.

Table 7 shows that 16,500 hectares were harvested for the 1991-96 period. A comparison of regeneration assessment records for the same area showed that 13,800 hectares have been surveyed and 13,657 hectares were found to be successfully regenerated. Surveys are yet to be completed on 2,174 hectares. The un-surveyed areas include blocks that have been planted, tended, planted with supplemental planting to boost stocking, naturally treated or were burned by wildfire in 1996 and 2003. These will be assessed in the near future commencing with the 2007 assessment program. Area not successfully regenerated in the original survey will also be reassessed for regeneration success in future surveys in future. The unsuccessful regeneration was from areas that were harvested and naturally treated along a winter road system on the former Sioux Lookout Crown Management Unit.

Table 7 - Harvested Area Successfully Regenerated - Summary of All Forest Units

Lac Seul Forest

	AREA IN HECTARES (All Forest Units Combined)	*AREA IN HECTARES (All Forest Units Combined)*
	Even-aged Management	**Uneven-aged Management**
Total Area Harvested	16,500	-
Total Area Surveyed for Regeneration Success	13,800	-
Total Unsurveyed Area	2,174	-
Total Area Declared Successfully Regenerated	13,657	-
Total Area Surveyed Not Successfully Regenerated	143	-
NSR	-	-
B&S	-	-
Not Available for Regen. (eg. Roads & landings)	220	-
Other - Burned 1996 or 2003	306	-
Percent of Area Surveyed Declared Successfully Regenerated	99.0%	



Source: GIS records and Lac Seul AR-7(2001-03), AR-14(2004)

Appendix B

Audit Team Members and Qualifications

Name	Role	Responsibilities	Credentials
Mr. Bruce Byford R.P.F. Arbex Forest Resource Consultants Ltd.	Lead Auditor Forest Management & Silviculture Auditor	Audit Management & coordination Liaison with OMNR & Auditee Review documentation related to forest management planning and review and inspect silviculture practices Determination of the sustainability component.	B.Sc.F. ISO 14001 Lead Auditor Training. FSC assessor training. 27 years of consulting experience in Ontario in forest management planning and resource inventory. Previous work experience on 10 IFA audits and FSC certification assessments.
Mr. Al Stewart Arbex Senior Associate	Wildlife/ Fisheries/First Nations Auditor	Review & inspect AOC documentation & practices First Nations consultation Determination of the sustainability component.	B.Sc. (Agr) ISO 14001 Lead Auditor Training. FSC assessor training. 38 years experience in natural resource management planning, field operations, policy development, auditing and working with First Nation communities. Previous work experience on 10 IFA audits.

Mr. David Watton Arbex Senior Associate	Forest Management Planning & Public Participation Auditor	Review documentation and practices related to forest management planning & public participation Determination of the sustainability component.	B.Sc., M.Sc. ISO 14001 Lead Auditor Training. 38 years experience in natural resource management planning, land use planning, field operations, and policy development. Previous work experience on 9 IFA audits.
Mr. Guy Winterton Arbex Senior Associate	Forest Compliance Auditor	Review FMP and related documents to ensure compliance with FMPM and other regulations Review field operations for compliance with regulations and guidelines and other documents.	B.Sc., M.Sc. ISO 14001 Lead Auditor Training. FSC assessor training. Previous work experience on 9 IFA audits. 38 years experience in all aspects of fisheries and wildlife planning, policy development, field operations and natural resource law enforcement. Previous work on 8 IFA audits

Mr. Trevor Isherwood R.P.F. Trilac Forestry Services Arbex Associate	Silvicultural, Forest Management and Contractual Compliance Auditor	Review and inspect silvicultural practices and related documentation Review and inspect documents related to contractual compliance and socio-economics Determination of the sustainability component.	B.Sc.F. Former General Manager of SFL 38 years experience in forest management and operations. Previous work experience on 6 IFA audits.
Mr. Mark Fleming R.P.F. Fleming Professional Forestry	Technical Advisor - SFMM	Analysis of SFMM model outputs and decision criteria and the determination of the sustainability component.	B.Sc.F. R.P.F. Previous work experience on IFA audits and FSC certification assessments Experience as OMNR Planning Forester & Unit Forest

Appendix C

Independent Forest Audit Guiding Principles

There are eight guiding principles in the 2006 Draft Independent Forest Audit Process and Protocol, which guide the audit.

Commitment Commitment is reflected in vision, mission, and policy statements of the Company. Vision and mission statements are intended to provide long-term guidance for the organization. Policy statements reflect how the organization's vision and mission will be achieved. These statements must be reflected in the day-to-day operations of the organization.
Public Participation The process of sustainable forest planning, implementation, and monitoring is conducted in an open consultative fashion, with input from all members of the planning team, Local Citizen's Committee, native groups and other parties with an interest in the operations of the forest Unit.
Forest Management Planning The forest management planning process involves the input of a number of individuals and groups to describe the current condition of the forest, the values and benefits to be obtained from the forest, the desired condition of the forest in the future, and the best methods to achieve the goal. Certain minimum standards and procedures have been established upon which all management Units are evaluated.
Plan Implementation Verification of the actual results of operations in the field compared to the planned operations is required to be able to assess achievements of the plan objectives and compliance with laws and regulations. In conjunction with the review of operations, the reporting tables are tested to ensure accurate results are reported.
Support System System support concerns resources and activities needed to support plan implementation so as to achieve the desired objectives. Appropriate control, documentation and reporting procedures must be in place and operational. Planned action should occur at planned times, in planned places and to the planned degree.

Monitoring

The activities and the effects of these activities in achieving management objectives must be regularly measured and assessed. In particular, the indicators of achievement must be assessed and their effectiveness reviewed.

Achievement of Management – Objectives & Forest Sustainability

Periodic assessments of the management of the forest Unit operations and the forest Unit must be made in order to determine whether forest sustainability and other management objectives are being achieved. This includes comparing the actual values of the predetermined indicators against the planned values and assessing the reasons for any significant deviations.

Contractual Compliance

The licencee must comply with the specific licence requirements.

Appendix D

Glossary for List of Acronyms Used

List of Acronyms

ACOP	Annual Compliance Operations Plan
AHA	Available Harvest Area
AOC	Area of Concern
AR	Annual Report
ATV	All Terrain Vehicle
AWS	Annual Work Schedule
BFPL	Buchannan Forest Products Ltd.
B&S	Barren and Scattered
CAS	Compliance Activity Schedule
CFMP	Contingency Forest Management Plan
CFSA	Crown Forest Sustainability Act
DM	District Manager
EA	Environmental Assessment
EMS	Environmental Management System
FIM	Forest Information Manual
FMP	Forest Management Plan
FMPM	Forest Management Planning Manual
FMNCP	Forest Management Native Consultation Program
FMU	Forest Management Unit
FOCIS	Forest Operations Compliance Information System
FOIP	Forest Operations Information Program
FOIR	Forest Operations Inspection Reports
FRI	Forest Resource Inventory
FRL	Forest Resource Licences
FOP	Forest Operations Prescription
FTG	Free-to-Grow
GIS	Geographic Information System
HA	Hectares
IEA	Individual Environmental Assessment
IFA	Independent Forest Audit
IFAPP	Independent Forest Audit Process and Protocol
ISO	International Standards Organization
LCC	Local Citizens Committee
LSF	Lac Seul Forest
LSAC	Lac Seul Advisory Committee
LSFMP	Lac Seul Forest Management Plan
m^3	Cubic Metres
MFP	McKenzie Forest Products
MOA	Memorandum of Agreement
MOE	Ministry of Environment
MOU	Memorandum of Understanding
NAD	North American Datum
NDPEG	Natural Disturbance Pattern Emulation Guideline
NIC	Not in Compliance

NRVIS	Natural Resource Values Information System
NSR	Not Satisfactorily Regenerated
OLL	Ontario Living Legacy
OMNR	Ontario Ministry of Natural Resources
OPFA	Ontario Professional Foresters Association
RAC	Regional Advisory Committee
RD	Regional Director
R.P.F.	Registered Professional Forester
RPFO	Report of Past Forest Operations
RSA	Resource Stewardship Agreement
SEIM	Socio-Economic Impact Modeling
SEV	Statement of Environmental Value
SFL	Sustainable Forest Licence
SFI	Sustainable Forestry Initiative
SFMM	Sustainable Forest Management Model
SGR	Silvicultural Ground Rule
SMA	Selected Management Alternative
SPA	Special Purpose Account
STP	Silvicultural Treatment Package
TMP	Timber Management Plan
TOR	Terms of Reference
WHMIS	Workplace Hazardous Materials Information System

Appendix E

Summary of Input to Audit Process

The following briefly summarizes the contacts and the any issues that emerged from audit investigations. Complete discussions of the issues, audit findings, assessments and any associated recommendations or suggestions are discussed throughout the body of the report.

General Public / Other Stakeholders

A notification explaining the requirement for the Independent Audit, the date, a map of the Forest, and an invitation to participate was placed in the Sioux Lookout Bulletin prior to the field audit. The notice included a toll-free telephone number and e-mail address for Arbex.

LCC members received a letter inviting their participation in the audit and offering the opportunity for a personal interview. An auditor met with the full LCC and distributed a questionnaire specific to the LCC and its activities.

Appropriate First Nations received letters and follow-up telephone calls explaining the audit process and requesting their involvement in the audit. A questionnaire specific to First Nation IFAPP requirements was faxed to each Band Office.

A random sample of 35% of the individuals on the 2006 FMP mailing list were sent correspondence inviting them to complete a survey (mail-in or on-line) with respect to forest management on the Lac Seul Forest. They were invited to contact the auditor by mail, toll-free telephone or email to express their concerns and views.

Individual interviews (face to face or telephone) were held with MFP representatives, Forest Resource License Holders, LCC members, tourism operators, and angler and hunter representatives.

Separate interviews were held with the past and current Sioux Lookout District Managers and the Plan Author.

Three tourism operations were interviewed in individual sessions.

Principal issues that were identified included:

<u>General Public:</u>

- A strong interest in the company remaining viable and that economic benefits continue to flow to Sioux Lookout and the surrounding area.
- Concerns that access closures prevented the full use of the Forest.
- Concern about the long term sustainability of the Forest.

The LCC:

- Members were concerned about the functioning and viability of the Committee.
- Some members were concerned about perceived conflict of interest issues associated with other members.
- Members were divided about the importance of remote tourism and the requirement for access restrictions (i.e. some in favor, some not).
- Members were concerned and divided about the amount of information being conveyed to the LCC (i.e. not enough, too much).
- Members were concerned about the long term sustainability of the Forest.

Native Communities:

- Concerned was expressed about the economic viability of their communities.
- Good working relationships had been established with MFP and OMNR.

McKenzie Forest Products Representatives (including Plan Author):

- A current and future shortage of quality wood.
- The cost (time, energy, dollars) associated with the FMP process
- An impression that OMNR environmental initiatives (i.e. guidelines) were overshadowing the economic and social aspects (i.e. sustainable development) of its corporate vision.
- The cumulative impact of OMNR wildlife guidelines was seriously reducing available wood supplies, especially caribou.
- The NDPEG threatens to further reduce available wood supplies.
- A concern about the adequacy of the science associated with Guidelines.
- The LCC had become an additional workload as opposed to a value added part of the forest management process.
- Responsibilities with respect to unused and decommissioned roads.
- The need to deal with large areas of low grade balsam

Ontario Ministry of Natural Resources (including the past and current District Managers):

- Sustainability of the Forest.
- Issues associated with the functioning of the LCC.

- The cost (time, energy, dollars) associated with the FMP process.

Remote Tourism Operators

- Many tourism operators signed agreements but they were less formal and not in the longer term RSA template format.
- The formal RSA process is too bureaucratic and needs streamlining.
- All reported a good relationship with MFP and indicated they were good to deal with in RSA discussions.
- Some operators expressed disappointment with the performance of the LCC.
- All indicated that access will continue to be an issue relative to remote tourism interests.